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Growth Human Development Social Cohesion



**Policy Research Committee
Draft Interim Report
October 4, 1996**


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Introduction

Looking to the future, even just nine years ahead to 2005, is perilous. Many more revolutions are prophesied than occur. Most occur unprophesied. Yet merely extrapolating from the present is unlikely to prepare us for the future either. This project takes a middle road -- scanning the available research to identify trends or forces, already in evidence or close at hand, that seem likely to grow in significance as we cross the threshold of the third millennium. The analysis isolates likely pressure points on Canadian public policy-making over the medium term. Our approach necessarily focuses on what we have learned more than on speculation about what may happen. But whatever surprises the future may hold, these pressure points will almost certainly preoccupy us over the coming decade.

This interim report presents the Policy Research Committee's overview and interpretation together with suggestions on what policy-makers will need to know in the future. It also includes the 11 main papers prepared for the Committee. Chapter 1 brings together the themes of the papers to provide an introduction for readers. Chapters 2 to 12 consist of the research building blocks based on the key themes identified by the Committee as meriting further research. Chapter 13 considers options for an interdepartmental framework and process to co-ordinate policy research.

Background

The Policy Research Committee was created in July 1996 as part of the Privy Council Office's Canada 2005 project to understand the policy environment over the medium term and to begin planning for the next decade. The Committee's mandate asks it to

...prepare a report for Deputy Ministers on the pressure points that are likely to arise in Canadian society by the year 2005 as a result of economic, demographic and social trends... (and to)... make recommendations regarding an interdepartmental research agenda and work program to address gaps in knowledge...

The Committee, with its two co-chairs, was to have members from 13 departments and agencies. Others were invited to participate and final membership grew to 22. The Terms of Reference and membership are included in the appendices.

Other elements of Canada 2005 deal with international and security issues, machinery and administration of government, national unity and the state of public opinion. Accordingly, these topics are not central to this report, although they are frequently touched upon. In addition, the Committee had

the benefit of a paper on globalization prepared by the Deputy Ministers' Committee on International Affairs. The division of issues among different working groups was designed to keep the various elements of the Canada 2005 project manageable; they will be brought together in later stages of work by the Privy Council Office.

The contents of this interim report of the Policy Research Committee fall into three categories. A fourth element of the work is in the form of departmental preparatory papers outlining their medium-term priorities.

Overview. The Overview in Chapter 1 examines the pressure points likely to develop in Canada by 2005 as a result of economic, demographic and social trends; it is not a comprehensive view of the future. Greater weight has been given to interdepartmental horizontal issues because of their scope and potential for useful co-operation on research. (Many important departmental issues are nevertheless captured in the departmental medium-term priorities.) Neither the Overview nor the individual reports offer policy solutions. Rather, conclusions are made about where answers might be found and what research is needed.

Research Building Blocks. The first level of synthesis undertaken by the Committee was to arrange departmental priorities and ideas under 11 interdepartmental themes that are the subjects of the 11 papers contained in Chapters 2 to 12. These building blocks review the state of knowledge and prospects for future research on what the Committee judged to be the most important issues facing Canada in the medium term; they may be profitably read by a wide audience.

Research Possibilities. Chapter 13 proposes a framework to co-ordinate socio-economic policy research within the federal government to improve our understanding of the pressure points. If Deputy Ministers wish to pursue an integrated interdepartmental policy research work plan, the Committee is prepared to recommend a detailed plan by December 1996 for implementation over the following year.

Departmental Medium-Term Priorities. The Committee began by asking departments to prepare five-page descriptions of pressure points of significance to them for the medium term. This provided the raw material for subsequent work. Some departmental priorities proved to be more or less restricted to the individual department and did not fit within the Committee's broad, horizontal theme. These "five-pagers", a total of 73, remain the responsibility of the departments concerned, but copies are available from the Committee.

The co-chairs would like to acknowledge the contributions of Committee members, the writers in several departments, and the secretariat.

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Overview

Overview

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1

Pressure Points in the Medium Term

Introduction

The Policy Research Committee has identified growth, human development and social cohesion as the fundamental socio-economic challenges facing Canada over the 1997-2005 period. These themes are developed further in this overview and in the subsequent chapters of this interim report.

With themes so broad, trends and developments could be organized in many ways. The Committee's approach is designed to meet its specific mandate. For the wider discussion that is to follow it is useful to begin by putting the issues in a broader context. This overview considers three perspectives. First, from a longer term historical perspective it looks at the fundamental tensions that have defined the Canadian experience and how the pressure points might be understood in this context. Second, it suggests that there have been two distinct periods of socio-economic development since World War II and that we may now be entering a third. Each of these periods has its own characteristics and national mood that affect the choice of priorities, and how public policy responds to them.

Before moving on to the three basic challenges mentioned above, this overview presents a section examining five underlying forces that we see to be the drivers of change in Canada over the next decade. It is the interplay of these forces that is played out in the sections on growth, human development and social cohesion from the present until 2005.

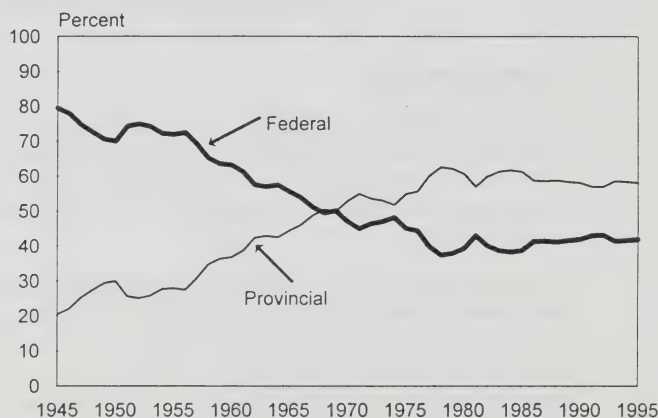
Historical Tensions in Canada

The three fundamental tensions that have defined the Canadian experience and character are much in evidence in the papers prepared for the Committee to highlight the expected pressure points on public policy for the period 1997 to 2005.

(1) *The Whole and the Parts: The Evolution of Federalism.* The tensions among regions and between the regions and the centre, which our federal constitution is designed to accommodate, were not a specified part of this project. Still, the nature of the pressure points indicates that today, more than ever, the pursuit of the Canadian experience requires flexibility and readiness to modify the rules of governance. This is critical if we are to accommodate diverse economic, cultural, social and demographic trends that affect relations between the component parts, and between the parts and the whole. As Figure 1 shows, the federal-provincial relationship has evolved significantly over time. Discussion of these issues belongs to other components of the Canada 2005 project.

Figure 1

Distribution of Revenue After Transfers, By Order of Government



Source: Based on Statistics Canada data.

(2) *Canada and the United States: North American Integration.* Canada has tried many strategies to manage tensions in the often difficult relationship with our much larger and more powerful southern neighbour. Entering the Free Trade Agreement, enlarged to include Mexico, Canada took a new course. Canadians took on the Americans in what they do best, trade and commerce — not to lose distinctiveness, but to save it. By 2005 this choice will be almost one generation old. Not everything has gone according to plan. More important for the long run, both countries are being profoundly affected by economic and social forces that neither can control.

Globalization, for example, creates pressures for economic and social harmonization while reducing the influence of governments, both here and in the United States.

Despite serious social and economic problems, the U.S. is set to leave the century fairly confident about its place in the world and its approach to national problems. This mood of renewal comes after success in beating off the economic challenge from Japan and Europe and attaining victory in the Cold War. Meanwhile, despite unprecedented trade growth over the past five years, Canada is deeply preoccupied with internal concerns; in recent years, its overall economic performance has not kept pace. Increased understanding of the forces at work in both this country and the U.S. will enable Canada to reassess its own course as well as the management of the relationship.

(3) The Individual and the Community: Willingness to Share. Canadians have reduced social tensions through a long history of sharing. Narrowing the gap between the advantaged and disadvantaged has been a preoccupation of Canadians and an important element of Canadian identity. The desire to take into account the interests and welfare of others has found policy expression in support for a common safety net to protect citizens from hardship, a system of intergovernmental transfers to create a common standard of public services across the country, and regional development initiatives, for example.

Recent debate about the country's future has revealed some cracks in the consensus on individual and community values and on sharing between regions. Fiscal pressures and other economic forces are now challenging our willingness to share between those who gain from the transition to a new economy and those who experience difficulties in coping with it. The coming years will see either the formation of a new social contract or a serious challenge to our social cohesion.

Three Post-War Periods of Socio-Economic Policy and Development

Canada's social and economic development since World War II falls into two distinct periods. With growing historical perspective, the differences between the periods before and after 1973 are becoming clearer. Whether in looking back from 2005 we will be able to see a similar break in social and economic trends occurring at the present time, is controversial and an unprovable proposition. Some important emerging trends indicate however, that this may well be the case. First among these is the growing importance of the development and management of knowledge in the lives of individuals, governments, firms and other organizations.

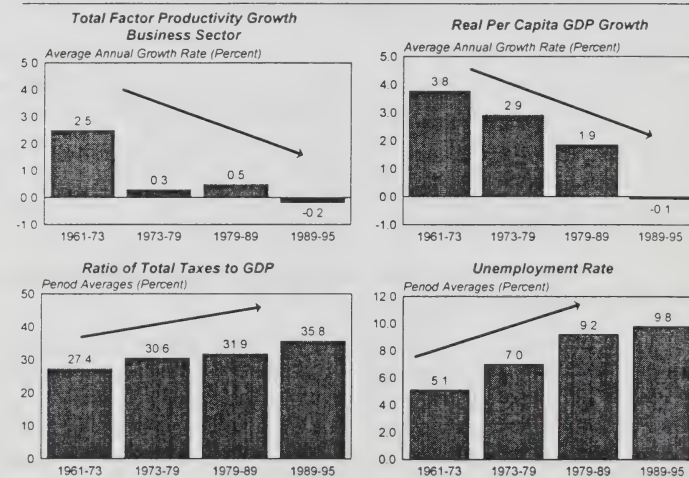
(1) End of World War II to 1973. The "golden era" of the post-war years up to the early 1970s was a period of undeniable social and economic progress. Economic growth was rapid, unemployment was low, real incomes rose steadily, growing numbers of women joined the workforce,

governments expanded social programs, and the basic institutions of society, like the family, seemed solid. Trade and international economic activity also grew steadily, but from a low base: international development and competition were perceived as supportive of Canadian aspirations. It was a time of rising performance and expectations when governments appeared to have tremendous powers to shape social and economic outcomes.

(2) *1973 to the Present.* The period after the early 1970s, which could be called the era of globalization, has been much less felicitous for Canada. It has been characterized by two trends: increasing international integration and declining public expectations because of weakening economic performance. First, the oil crises brought home the growing interdependence of nations, economies and societies, and the inability of any one nation to insulate itself from outside shocks. Inexplicable then, and still not well understood, an abrupt decline occurred in most western economies in the productivity growth that had led post-war expansion. At the same time, international competition proved relentless; individuals, firms and governments found themselves compelled to adapt to new pressures.

Figure 2

Canada's Economic Performance, 1961-1995



Source: Based on Statistics Canada data.

Based on the expectations of the first post-war period, countries undertook bold experiments in public policy to try to maintain an expected rate of progress. But the underlying economic performance did not sustain these expectations. As depicted in Figure 2, the outcomes are well known: unemployment, debt, inflation, and a growing inability to afford desired

levels of state spending despite rising taxes. Distributing a static national income is more divisive than sharing the gains of growth. In the preceding period, investment in health, education, and other social capital seemed to support improvements in the economy and were, therefore, mutually reinforcing. The sharp decline in economic growth reduced countries' ability to make social interventions. Moreover, the expected benefits were not always realized; for example, welfare dependency and unemployment increased.

As this century draws to an end, Canadian expectations seem to be painfully falling in line with the ability of the economy to support them. Apart from unemployment, the other symptoms of the failures of the period — inflation, deficits and debt — are being brought under control. The private sector is adapting, if still somewhat grudgingly, to technological and competitive pressures. The appetite for the kind of bold policy initiatives that were common earlier in the period appears to have been lost. As long as the pressure to deal with the debt remains, governments are adapting by redefining their roles in society and changing policies.

Individuals and the community have had to absorb big setbacks. Real wages have stagnated; structural unemployment has grown across cycles; economic sectors and regions are being transformed. Most worrisome, wrenching changes have yet to produce real benefits, hence we experience a national and international mood of insecurity. Governments have been fiscally constrained to pay less attention to people who have not weathered these transitions smoothly or well, giving rise to a raft of social and other problems. Such issues as environmental degradation and social cohesion have not received the attention that objectively they deserve.

(3) *2000 and Beyond.* Some evidence gives reason to believe that the difficult growth-slump period may be coming to a close. A knowledge-based change in the economy appears to have begun. Knowledge-based growth, with its dependence on highly educated and adaptable workers, will have an impact on future economic and social development. Whether it will be the key to reversing the trends in economic performance, or just a change which fails to live up to its billing, is still to be determined.

Public policy appears to have moved half circle from proactive to reactive, from distributing the gains of a growing economy to attempting to compensate for the failure of the economy to grow as expected. This has involved cleaning up the consequences of over-ambitious programs and addressing the causes of slow productivity and income growth. Progress is by no means assured. Policy decisions must be made about how to respond to both a backlog of social and economic problems and changes in underlying forces. Failure to consolidate recent progress on deficits, debt and inflation would impair our future ability to adapt. Similarly, given the importance of education, training and continual adjustment to the

knowledge-based economy, the failure of the public and private sectors to prepare to meet new demands could result in continued poor economic performance and slow social progress.

A long-term economic recovery, or an enduring change in people's economic expectations would raise new questions. In historical perspective, the intense attention given to economic policy over the past few years may appear to have been disproportionate. Other policy areas, such as environmental quality, social equity, and social cohesion, are no less important; in the long run, they may be more important. The main lesson of the early part of the period we are now entering may be the obvious one — that social objectives cannot be pursued independently of economic capacity. The challenge may be to recognize that economic recovery cannot be sustained without progress on problems of human development and social cohesion.

Underlying Forces

A review of the 10 research building blocks made it clear that a small number of fundamental forces were driving many of today's social and economic changes. Statistics Canada was therefore asked to provide an eleventh paper on these "megatrends", which is presented as Chapter 2 of this report. We take up these underlying forces at the outset because of their impact on future growth, human development and social cohesion. They determine to a considerable extent the framework within which governments may respond to new challenges and opportunities.

In this discussion we move from the forces that are mostly international in character to those that are more domestic. The first three — globalization and North American integration, technological change and environmental pressures — are the primary transmission belt of outside changes into Canada. Public policy may help Canadians respond to these changes, but on balance will do little to shape the underlying forces themselves. The latter two forces — demographics and the fiscal context — are more amenable to being shaped by Canadian public policy, through immigration policy and decisions on medium-term fiscal targets.

Globalization and North American Integration

Economic integration is not a new phenomenon. The world economy has been highly integrated before. For example, in the decades before World War I, some international indicators of economic integration like trade were as high as they are today or higher. The difference is that current globalization involves a greater speed and depth of transactions and touches all aspects of the economy, society and culture. Economic theory suggests that the expansion of markets occasioned by globalization presents opportunities for growth, job creation and a better quality of life; but there are no guarantees. Theory is not so clear about the impact of globalization on culture and social cohesion. In any event, it appears evident that the continuing force of globalization will be inexorable over the medium term.

The Committee's mandate is focused on Canadian society. One of the lessons of the Committee's work is that the lines between domestic and international issues are blurring everywhere. The research efforts in Chapters 2 through 12 have been explicit about the need to research issues in a global context. What the Committee did not address, however, is Canada's strategic position in the world, which is being dealt with elsewhere in the Canada 2005 project.

Figure 3

Exports of Canadian Goods and Services



For Canada, the single most important manifestation of globalization is our relationship with the United States. No other external influence has nearly as profound an effect on the economy and society. Although commercial relations with other countries have been expanding, as Figure 3 illustrates, our relative dependence on the American market has continued to grow. In 1995, 75 percent of our trade was with the U.S., up from 70 percent in 1990. Over one billion dollars in trade flows daily between the two countries, about two-thirds of Canada's inward and outward investment flows are with the

U.S., and about a quarter of everything that Canadians consume is produced there. The paper on North American Integration, presented as Chapter 3, identifies some key challenges in this evolving relationship, including the balance that must be struck in addressing the newer challenges in Asia Pacific.

The underlying challenge to Canada, unchanged over the past decade, is to obtain the economic and other benefits of integration and build a foundation for independence in other domains, such as social programs, culture and the environment. Independence

Pressure Point

- As Canada has become more economically integrated with the United States in recent years, its economic performance has lagged. If this trend continues, our capacity to remain distinct may weaken and our ability to project Canadian independence on the broader global stage may be threatened.

has become increasingly difficult, however, because our economic performance over the past 10 years has diverged unfavourably from that of the U.S., especially during Canada's extended economic slump in the 1990s. This would be a serious matter if it were to continue. Chapter 3 describes the economic and non-economic hurdles Canada must overcome to exercise freedom in dealing with political, social, cultural and environmental pressures in accordance with this country's traditions, values, and interests.

Technological Change and the Information Revolution

The spread of information technology is changing the economy, but also challenging traditional notions of social equity, ethics, sovereignty and cultural expression. Although technological change and the information revolution are not the subject of a discrete paper, the Committee agrees that they are among the most important determinants of economic growth, human development and social cohesion. The promise and pressures of the information society are reflected in many of the individual papers comprising Chapters 2 through 12.

Pressure Point

- Taking advantage of technological change, especially in the information field, is critical to economic growth, however, it also requires potentially difficult adjustments

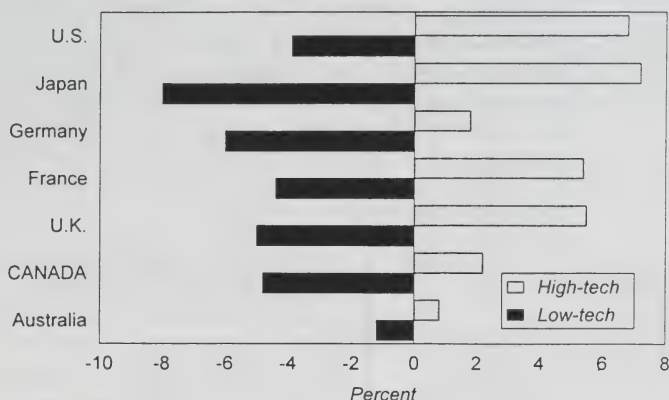
Studies by the Organization for Economic Co-operation and Development (OECD) on the use of innovative technologies have concluded that, on balance, they contribute to productivity growth and tend to increase employment and wages. As the OECD noted in its report on Technology, Productivity and Job Creation (1995):

"The process of technical change and knowledge accumulation is not smooth; it is best described as one of "creative destruction". It disturbs the regular foundation of economic activities and requires the adaptation of most economic structures, behaviour and the allocation of resources among sectors, firms and occupations. Adaptation can be costly; it can also take time. Moreover, while the benefits far exceed the costs, they may accrue to different firms or individuals."

The distributional effects of technological change are one reason why many people are cautious about embracing it. But this should not obscure the fact that continued technological progress, combined with innovative work practices, is our best hope for long-term improvements in economic performance. Indeed as Figure 4 indicates, Canada's problems may be related in part to our slower shift to technology-intensive activities.

Figure 4

*Changes in Output Share,
By Level of Technology: 1970-90*



Source: OECD Economic Surveys Canada 1995

Technology also affects culture and social cohesion. Traditional ideas about the nation-state are constantly being challenged by flows of ideas and cultural products. With people defining themselves as members of a variety of groups, not all of which coincide with national, provincial or other traditional boundaries, what does it mean to be Canadian? The potential benefits for cultural expression are limitless, given the growing access to a world-wide audience. The challenge is to maintain a distinctive voice in both new and traditional media, so that Canadians can know about themselves and also produce their own original creations for the larger world audience. The paper on Canadian Identity, Culture and Values — Chapter 11 of this report — deals more extensively with these questions.

Technology also raises a number of ethical concerns. From an environmental or health perspective, the cost of many technological advances may be seen to outweigh the economic benefits. Public reluctance to accept many bio-engineered foods and other products is a case in point. New reproductive and genetic technologies are raising ethical issues about how advances in knowledge should be used. These issues are not discussed in the papers that follow, but deserve more attention.

Environmental Pressures

One cannot today single out an environmental issue that is likely to predominate in 2005. A decade ago, we faced essentially the same environmental challenges as today: air and water quality, the ozone layer, climate change, disposal of toxic substances, biodiversity, and sustainable resource management. While our understanding of many of these issues

has grown considerably over the intervening years, we often do not understand the full risks involved. That goes for, say, the flow of toxic substances and wastes into the environment, or the implications of disturbing global processes that maintain the biosphere, such as climate regulation or biodiversity. For many Canadians sustainability of natural resources is linked not only to job security but also to a way of life that has supported communities for decades. The collapse of the Atlantic groundfish stocks and the closure of many fisheries is a case in point. As our understanding of environment and sustainable development issues grows, we are realizing that human and ecosystem sensitivity to pollution and other environmental stresses tends to be greater than previously thought.

Pressure Point

- The health and economic impacts of environmental change are worrisome but difficult to predict. Perhaps the greatest risk of low-probability, high-impact events lay in this area.

The scale and nature of environmental risks are expected to evolve considerably. Rapid population growth and industrialization of the developing world will place increasing pressure on domestic and global environmental resources. Canada's relatively high environmental quality and natural wealth may provide it with a unique competitive edge in the face of serious global environmental problems.

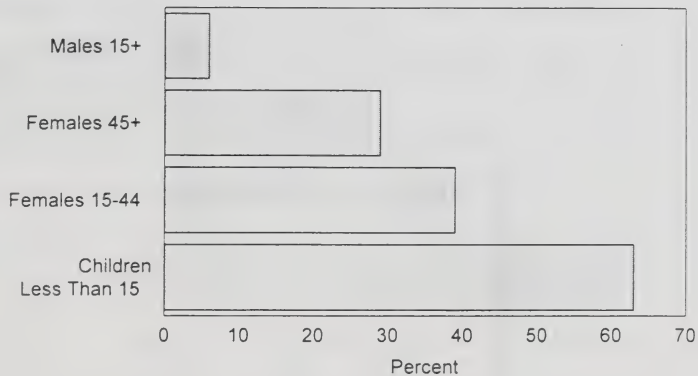
Technological change will bring both environmental improvements and pose environmental risks to human health and ecosystems. For instance, technological change and the information revolution hold out the promise of providing the means to generate wealth in a less material-intensive and polluting way. At the same time, the accelerating rate of technological change will lead to new risks: new chemicals, products, and processes will have to be assessed for environmental and human health effects.

Opinion surveys show that Canadians regard the environment as a core issue, although not at present a top-of-mind concern. Interest in environmental issues is enduring and closely linked to concerns about health, future generations, and the economy. For instance, almost two-thirds of Canadians believe that their health has already been hurt by pollution. Three issues in particular — toxic substances, air quality and water quality — have consistently been top environmental concerns over the past 10 years. Canadians' concerns largely relate to the legacy to future generations — their health and well-being, natural heritage and economic prospects.

The paper on Environment and Sustainable Development — Chapter 4 of this report — elaborates on the linkages between the environment and health and the economy. It emphasizes the importance of an integrated approach to environmental, social and economic policy. It highlights Canada's mixed record in tackling environmental problems, underlines the persistent and complex nature of many environmental issues, and dwells on the need for effective action at the local, national and global levels. As Figure 5 shows, serious environment and health problems are found even in remote parts of Canada.

Figure 5

***PCBs Accumulating in Inuit:
Percent of Inuit at Broughton Island
Exceeding Health Canada 'Tolerable' Guidelines***



Source: State of the Environment Report, 1995

The challenge will be to make concrete progress on key environmental challenges within the context of our economic and social objectives. This will not be easy since environmental issues are inherently complex and long term and embedded in larger economic, social and geopolitical dynamics. They require effective action at both domestic and international levels. They also require an understanding of human and natural systems — and their interaction. The key will be to continue scientific and economic research and analysis and to develop an integrated approach to social, environmental and economic policy. That is the essence of sustainable development.

Demographics: The Changing Face of Canada

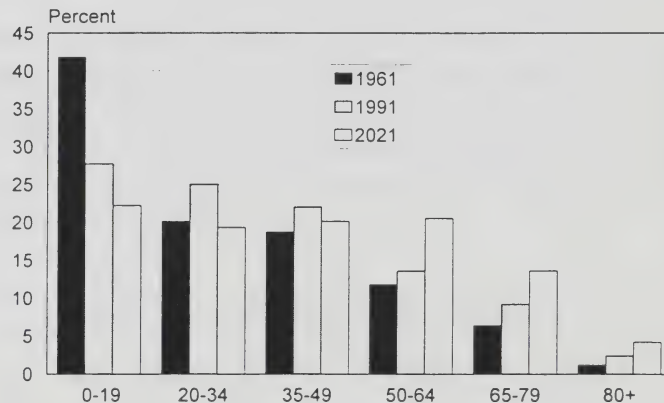
Canadian demographer David Foot has claimed that demographics explains "about two-thirds of everything". Even if he is only half right, demographic change is a defining force for future policy. The basic trends are highlighted in the Megatrends paper in Chapter 2.

Over the next decade, Canada's population will grow at less than 1 percent a year, a considerably slower rate than the 1.3 percent experienced between 1970 and 1990. Slower growth is due to a declining natural growth rate, which results from an ageing population with a longer life expectancy and weak fertility rates. Net population growth will come to depend primarily on immigration.

Canada's baby boom represents almost one-third of the population. As Figure 6 shows, their ageing continues to change the face of the country. By 2005, their vanguard will turn 60 years old. Predicting how they will behave as they enter late middle age and face the prospect of old age is difficult. Baby boomers have a history of re-defining the attitudes and behaviours of each age category that they have entered. Given their demographic weight and economic power, whatever directions they take next will strongly influence the priorities and mood of the period.

Figure 6

***Canada's Ageing Population,
Population Distribution by Selected Age Group***



Source: Based on Statistics Canada data.

The decline in Canada's fertility rate is linked to the marked change in the role of women over the past generation. Women no longer devote the bulk of their working years to the care of children and other dependents. Family life has been transformed, with the majority of women now combining care responsibilities and full-time paid employment. The family with two earners has replaced the former typical family of male breadwinner and mother at home. As well, the proportion of lone-parent families continues to grow. Institutions outside the family, such as schools and daycare, are compensating for these changes by playing a stronger role in socialization and child development.

Canada receives more immigrants per capita than most other countries. The ethnic mix has changed dramatically over the past 40 years. In 1994, only 17 percent of immigrants originated in Europe or the U.S. compared with an overwhelming 95 percent of those arriving before 1961. By contrast, the proportion of Asian and Middle-Eastern immigrants has climbed significantly to 64 percent in 1994 from 3 percent before 1961. If these trends continue, visible minorities will account for one in five Canadians by 2016, up from one in 20 in 1981, with half of them living in either Toronto or Vancouver.

While immigration levels are adjustable, there is diminishing latitude in the sourcing of immigrants, raising complex challenges for immigration and social policy. Canadians agree that cultural diversity makes for a stronger country. In a globalizing world, Canada's experience in integrating people from a variety of cultures provides an advantage in dealing with other countries. However a changing ethnic mix has implications for a collective Canadian identity.

Demographic change varies dramatically across the country. British Columbia, Ontario and, to a lesser extent Alberta, continue to attract interprovincial migrants, while most other provinces are losing them. Policy research must consider the consequences in the medium and long term of the movements of people among regions, within rural areas, and particularly between rural and urban communities. The settlement preference of immigrants for major urban centres and the continuing depopulation of rural areas, particularly through the out-migration of rural youth, is polarizing rural and urban Canada. The proportion of rural population is now at 30 percent, less than the 35 percent of total population in Canada's four largest urban areas. The economic and social implications of population loss in parts of rural Canada contrast with the continuing growth of major urban centres where overcrowding is creating problems, such as increasing traffic congestion, pollution and crime.

As detailed in the paper on Aboriginal Issues in Chapter 10, the Aboriginal population is growing faster than the national population. Almost four out of 10 Aboriginal people were under 15 in 1991, double the national proportion. Aboriginal fertility rates are twice as high, but life expectancy is 10 years less. These people are poorer, less likely to participate in the labour force, more than twice as likely to be unemployed; average earnings tend to be half those of other Canadians, but labour force growth is expected to be three times higher.

The emerging young, impatient, mobile Aboriginal population — needing new schools, entry-level jobs and room for self-expression — is comparable to the national youth population in the 1960s. Then, the economy was strong and massive investments were made to accommodate the needs. Now, the prospects for similar accommodation of a small segment of the population are less certain. Public perception and understanding of Aboriginal conditions fail to match the seriousness of the reality;

Canadians are increasingly unsympathetic to what they regard as special treatment for this group. Pressure will increase to find ways to accommodate Aboriginal needs in broader policies, such as those dealing with issues like jobs, youth problems and poverty that are particularly acute in the Aboriginal setting.

Fiscal Context

Over the medium term covered by this report, Canada's fiscal policy focus will move from deficit reduction to debt control. The fiscal challenge is both a problem in itself and the major determinant of the government's ability to respond to other challenges and opportunities.

As illustrated in Figure 7, Canada's federal public debt has grown to about 72 percent of the size of the economy today from just 19 percent some 20 years ago. The total public debt is out of line with that of most of our major trading partners. Interest charges now consume 36 cents of every dollar in taxes paid by the federal taxpayer, compared with 22 cents in 1981-82 and just 11 cents in 1974-75. Costs associated with this burden are significant; they affect the country through reduced capital stock, increased foreign indebtedness, lower growth and incomes, increased inflation risk, and reduced room for fiscal flexibility. The net effect is to damage economic efficiency and to introduce complications into the distribution of income.

Figure 7

Net Federal Debt as a Percentage of GDP



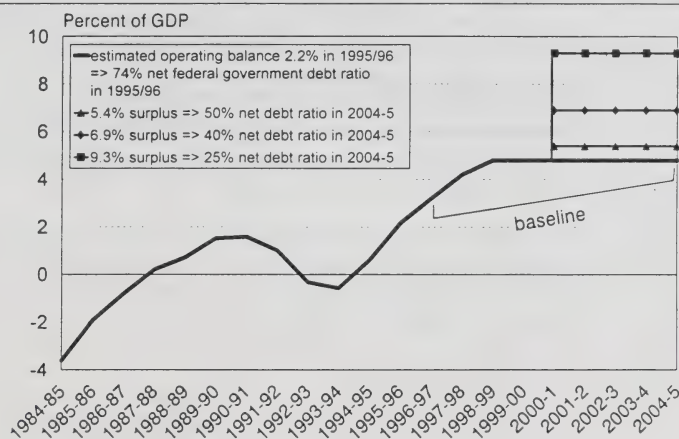
Source: Finance Canada

Getting the debt under control now requires more than deficit reduction. The key decision in the medium term is to determine a sustainable debt target expressed as a ratio of debt to Gross Domestic Product (GDP). As Figure 8 shows, reaching such a target will require continuing operating

surpluses over the medium term, that is, surpluses in tax revenues over program spending. A target of 50 percent debt-to-GDP ratio in 2004-05, say, would require average annual operating surpluses of 5.4 percent of GDP a year between 1999-2000 and 2004-05. Currently, the federal government runs an operating surplus of 2.2 percent of GDP, and this is forecast to rise to slightly over 4 percent by 1997-98. While decisions about the appropriate target and how fast to reach it have yet to be made, it seems fairly clear that fiscal constraint will loom large over the medium term. It is argued in Chapter 5 that there would appear to be little room to reduce taxes significantly in the near term. As well, spending discipline will need to limit program spending to 12 percent of GDP for some time to come.

Figure 8

Federal Government Operating Balances as Percent of GDP, Canada



Source: Finance Canada

The scenarios outlined in Chapter 5 allow for some increased government spending over the medium term, but only in line with economic growth. Fiscal pressures will therefore likely limit the size of government and the

nature of its activities. Depending on the target level, this may necessitate a reassessment of priorities and perhaps further spending reallocations. In any event, the government will need to look to policy instruments other than traditional spending programs to meet objectives. The challenge will be to convince the public, already receiving significantly less in services than it pays for in taxes, of the need for restraint,

Pressure Point

- Canada's fiscal situation has improved significantly in recent years. Bringing the debt-to-GDP ratio to a sustainable level will require a decision on an appropriate target and continuing operating surpluses. During this period, the federal government risks losing visibility to citizens and appearing less responsive to demands for tax reductions and new program spending than the U.S. and the provinces.

yet at the same time secure a visible and relevant role for government. Failure to succeed in these tasks risks seeing large segments of society, especially the middle class, becoming more alienated. The federal government's situation will be complicated by the fact that the provinces have relatively less debt and will therefore have relatively more fiscal freedom.

In establishing a debt target, and then reaching it, the interplay between fiscal and monetary policies will be crucial. A debate is emerging in Canada and elsewhere on the future of monetary policy and price stability measures. Some researchers suggest that a zero inflation target imposes higher social and economic costs than were originally thought, and that somewhat higher targets might be needed to keep the economy growing, creating jobs, and meeting the fiscal targets. The government is committed to announcing new inflation targets after the expiry of the present ones in 1998. A thorough evaluation of past experience will be needed in setting the new targets.

What Policy-Makers Need to Know

The five underlying forces we have described will continue to influence our prospects for economic growth, human development and social cohesion in the medium term and beyond.

Understanding the growing linkages between domestic and international issues will be important for policy decisions in a number of areas. A particular issue for Canada will be to understand the reasons for the divergence between recent Canadian and American economic performance as a first step in developing policies to close the gap.

Environmental pressures are sometimes seen as a long-term concern, but among the forces covered here, these are the most unpredictable. Policy research cannot skimp on developing information on high-impact, low-probability events. Other important questions for research include how to respond to climate change, the linkages between the environment and economic performance, and innovative approaches to reaching environmental objectives.

Demographic trends are slow moving and should be well understood by policy-makers. Owing to the population's low natural growth rate, the impact of immigration will be magnified in the medium term. Policies on the number and class of immigrants to be received should be informed by detailed research on their likely impact on both the economy and social cohesion.

Fiscal restraint will likely remain the top concern of policy-makers over much of the medium term. The main research task will be to provide empirical support for reaching decisions on appropriate debt and inflation targets.

Pressure Point

- A robust economy is necessary (but not sufficient) to improving the quality of life of Canadians, preventing growing inequality and improving social cohesion. The past 25 years of modest growth in our economy and incomes shows no sign of an early upturn.

Growth Challenge

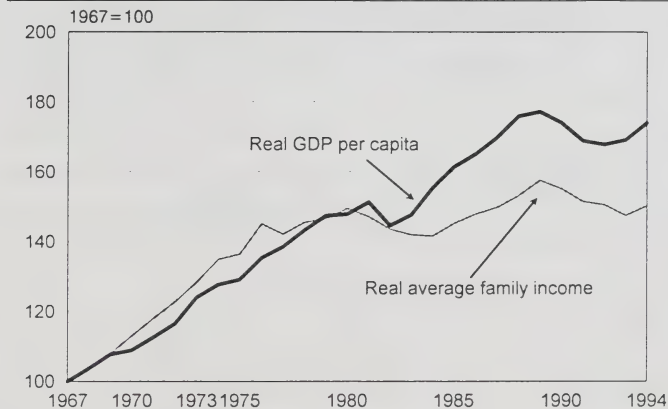
Economic Growth

Although Canadians enjoy a relatively high standard of living, the growth of real income has slowed markedly in the past 20 years. Real income per capita has grown at an average annual rate of only 1.9 percent since 1973, although most of this growth took place before 1980. The consequence is tremendous,

compounded as it is by the greater fragmentation of the family, described in the human development section of this Chapter and shown in Figure 9. Real average family income has grown by only 1.6 percent a year since 1973 although most of this growth took place before 1980.

Figure 9

Real Per Capita GDP and Real Average Family Income in Canada, 1967-1994

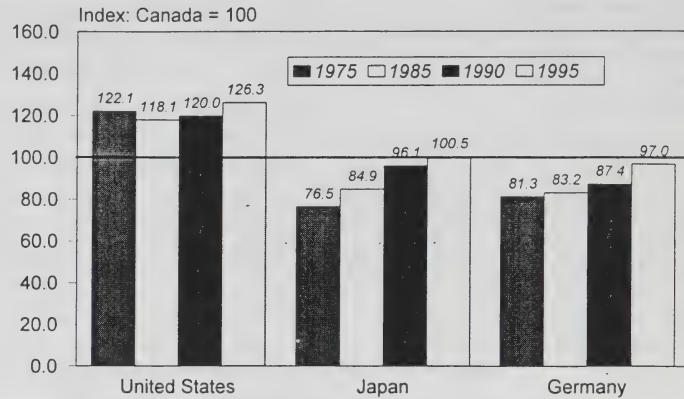


Source: Statistics Canada.

In the past 20 years, income growth has also become more irregular, as underlined by the last recession, and more unequally shared. Moreover, we have lost ground to major competitors: Figure 10 shows that the gap between the U.S. and Canada in GDP per capita has widened, while Germany and Japan have caught up with Canada.

Figure 10

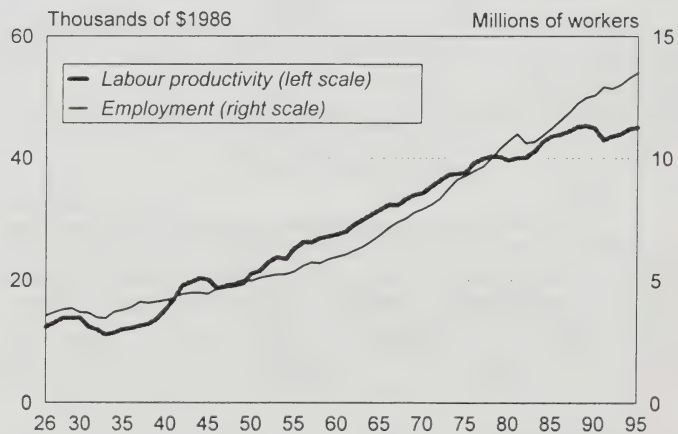
Level of GDP Per Capita* Canada, U.S. and Selected Industrialized Countries



* Using current prices and current purchasing power parity exchange rates.
Source: Industry Canada compilations using OECD data.

Figure 11

Labour Productivity and Employment



Source: Based on Statistics Canada data.

In meeting the growth challenge, we must distinguish between short-run gap-closing to get closer to existing potential output, and longer-run expansion of growth potential itself through improvement in the trend rate of productivity growth. Emphasis on productivity is crucial. Other traditional sources of growth potential — the labour force source population and the participation rate — will contribute less in coming years. Hence labour productivity, which has accounted for about 60 percent of real per capita GDP growth in Canada since 1961, will become even more important.

Labour productivity is determined by the amount of capital per worker and by the efficiency with which all factors of production are used in combination, or total factor productivity (TFP). Since capital per worker actually increased over the past decade, we must look to total factor productivity both in examining poor performance in the past and in seeking to improve performance in the future.

Productivity, Adjustment and Innovation

Beginning about 1973, overall productivity growth rates fell off dramatically in all major industrialized countries; they have remained lower ever since. What is the cause of this change and what can be done to reverse it?

These crucial questions have not been answered yet. Subjects that have been studied to explain the slowdown include a decline in the skills and education of workers, slower growth in research and development

Pressure Point

- We can no longer draw on a growing labour force source population and participation rate to fuel economic growth; future growth will increasingly depend on increases in productivity. We need to know more about what factors will lead to higher productivity growth.

spending, slower growth in infrastructure spending, lower capacity utilization rates, slower rate of capital accumulation, reduced importance of the "catch-up" bonus because productivity levels are converging among developed countries, and the increased shift in resources from high productivity to low productivity sectors. Research suggests, however, that all these factors together explain only about 50 percent of the slowdown.

The decline is especially puzzling because it occurred just at the time when powerful new technologies, introduced in the 1970s and 1980s, were expected to have a major influence. A number of ideas have been proposed to explain this "productivity paradox". Of these, one of the most convincing is "failure to adjust". Specifically, adjustment means innovating on all fronts — not just adopting the "hard" technologies, but also the more flexible organizational structures, new management strategies and innovative human resource developments that are needed to make the hard technologies work. Failure to adopt these complementary innovations meant failure to realize the productivity potential of the new technologies.

Such factors have affected all developed countries to some extent, so why has Canada's performance been particularly weak? Some evidence suggests that slower and weaker adjustment to the energy-price and exchange-rate shocks, slower capital accumulation, slower R&D spending, slower adoption of leading hard and soft technologies and relatively weak competition in domestic markets have been contributing factors. In addition, research suggests that Canada's recent demand management policies may have inhibited adjustments in our economy.

To generalize, inadequate adjustment to change and lack of innovation might be seen as the broad reasons for Canada's particularly poor record in productivity growth; but the devil is in the details that we need to know much more about. These issues are discussed at greater length in Chapter 6 on Improving Productivity.

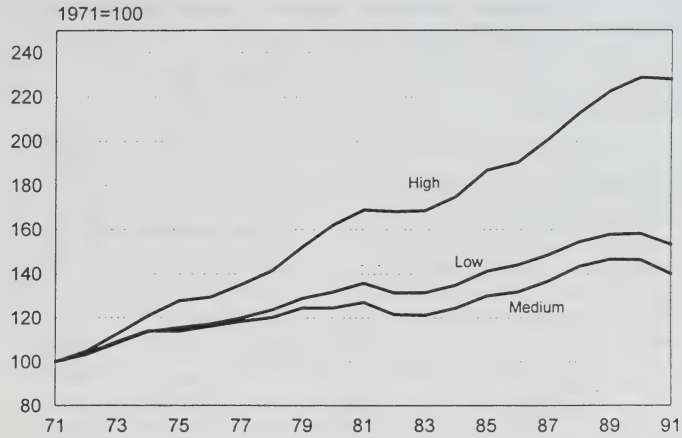
The Knowledge-Based Economy

The major adjustment facing the Canadian economy is already under way: the shift to knowledge-based growth, characterized by falling costs and rising efficiency in the transmission, retrieval and analysis of information. It involves more than simply promoting technology creation and diffusion. The effective management of knowledge is required — the organizational capability to create, acquire, accumulate and exploit knowledge — as a key source of competitive advantage in the innovation process.

Knowledge-based growth involves a shift in the economic centre of gravity towards services and knowledge-intensive and technology-intensive industries. Output and employment growth are expanding fastest in high-tech industries, such as computers, electronics and aerospace, as illustrated in Figure 12. In the past decade, the high-tech share of OECD manufacturing production and exports has more than doubled. Knowledge-intensive service sectors, such as education, communications and information, are growing even faster. Computers and related equipment are the fastest-growing component of tangible investment. Equally important are investments in intangible capital such as R&D (see Figure 13), intellectual capital, software and technical expertise. Investments such as these contribute directly to the development of high technology manufacturing and service sectors through their demand for leading edge products and services. They also maintain jobs in traditional areas of the economy such as agriculture and natural resources.

Figure 12

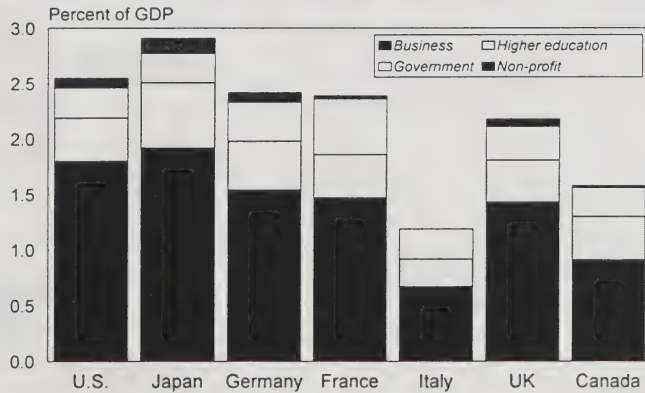
**Employment Growth by Knowledge-Intensity
Total Business Sector, 1971-91**



Source: Gera and Massé (1996)

Figure 13

**International Comparison of R&D Expenditure
by Sector of Performance, 1994**



Source: OECD, Main Science and Technology Indicators, 1996(1)

The OECD, which has intensively studied the relationship between productivity, job creation and technology, notes that in the long run technological knowledge is the main source of economic growth and improvement in the quality of life. Technological change is not smooth, however; it requires economic restructuring and distributes benefits unevenly among firms and individuals.

Pressure Point

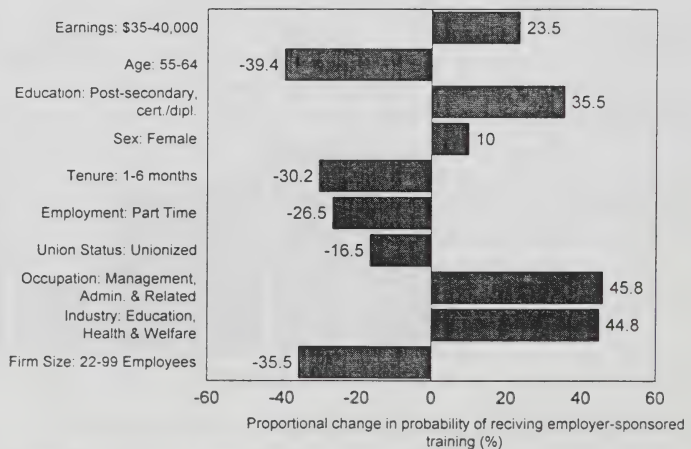
- The world economy is becoming increasingly knowledge-based. This transition holds the prospect of improved performance, but introduces a new set of transition problems. To adapt, Canada will need to upgrade the skills and education of its workforce and make the management of knowledge a priority for individuals, firms, governments and other institutions.

Individuals and firms that adjust and innovate are the ones that survive and thrive. Successful firms are those that are innovative in three principal areas. They adopt and apply new technologies; they innovate in human resource management; and they exploit the synergies between the two. Canadian research corroborates these findings. Several surveys indicate that, in a variety of industries, successful performance correlates with adoption of advanced computer-based technologies.

Moreover, the impact of hard technological innovations is improved by innovations in organizational structures and management strategies, such as total quality management practices that emphasize teams, training and pay-for-knowledge. Yet many firms continue to follow traditional human resource practices; that is, they place a low priority on training and development of workers, employee participation, innovative compensation practices and workplace flexibility.

Figure 14

Factors Affecting the Probability of Receiving Employer-Sponsored Training



Note: Probabilities are in relation to the "baseline" worker.

Unfortunately, many Canadians lack the skills required to participate fully in innovative workplaces, or large parts of the knowledge economy. While skills are traditionally seen in terms of specific abilities, the new economy requires broad and highly transferable skills such as problem-solving, reading, numeracy, writing, oral communication, information technologies and the ability to learn. Despite the rising education levels of the Canadian population, wide gaps exist between the less and more highly educated. Many students do not complete high school and many leave without a sound foundation in basic skills. In addition, the more highly educated and affluent are much more likely to continue their education and training after they have left school, as shown in Figure 14. Surveys show that the workplace plays an increasingly important role in the development of workers' skills, but that continuing education is unequally distributed in the workforce, favouring those with stable employment and high levels of education and income.

What Policy-Makers Need to Know

A better understanding of the causes of the slump in productivity growth is crucial for policy decisions. Despite tremendous advances in technology and major policy initiatives in which productivity improvement was an objective (such as tax reform and trade agreements), productivity growth rates have fallen. Overall performance is probably determined by the ways in which labour, ideas, capital and resources are brought together in the office or factory. The importance of each of these factors and their interplay are subtle and complex matters. They must be understood at the micro level to enable the design of policies with predictable impacts. Hence the need for more research at the firm and workplace level.

Understanding more about the macro-micro linkages behind productivity performance will also be important. For example, will the net effect of a very low inflation environment be to impede structural change by making real wage adjustment more difficult? Are deficient adjustments or inadequate policies at the micro level contributing to the severity of the business cycle and unemployment? Research on policy sequencing may also prove to be useful for future decisions. For example, would the payoffs from future structural reforms be higher with co-ordinated measures designed to increase the adaptability of the workforce?

Sectors of traditional strength in the Canadian economy such as natural resources and agriculture will continue to make a substantial contribution. An effective infrastructure system, whether traditional or "new", is also a prerequisite for economic growth. These traditional wealth-creating and wealth-supporting activities are themselves adapting and innovating as fast as other sectors, if not faster. But they face particular challenges, based on their location, capital-intensity, workforce needs, competition from third world countries, environmental sensitivity and other factors. The development of policy frameworks to support continued growth and adjustment in the mature sectors will require targeted, sectoral policy and scientific research on these kinds of issues.

The growth of knowledge-based economic activity, in both high technology and traditional sectors, poses new questions for policy-makers. A new kind of infrastructure is required to support the creation, diffusion and effective application of knowledge. Many decisions are still to be made as to how this infrastructure should be designed and how the interests of the creators and users of knowledge can best be balanced. The role of the individual in the knowledge-based economy is key, since performance is ultimately dependent on having a large number of people able to contribute their ideas and creativity. As the following sections of this chapter indicate, our economic well-being depends on the development of our human resources and on the cohesiveness of our society. But they face particular challenges, based on their location, capital-intensity, workforce needs, competition from third world countries, environmental sensitivity and other factors. The development of policy frameworks to support continued growth and adjustment in the mature sectors will require targeted, sectoral policy and scientific research on these kinds of issues.

Human Development Challenge

Turning from the economic to the social scene, we know the two are intertwined and buffeted by the same “underlying forces” described at the beginning of this chapter, such as globalization and the emergence of the information society. The list of social policy problems confronting governments today appears daunting: child poverty, youth unemployment, growing inequality in earnings, middle class insecurity and population ageing. Policy research can point the way to a host of potential remedies, but the real challenge for policy-makers will be to understand the interdependence of all these seemingly disparate problems. Policies in one area will inevitably affect others.

Human development covers all aspects of human experience: childhood, work, learning, ageing, caring for others, participation in the community. Deficiencies, or deficits, in human development affect not only the economic bottom line in terms of productivity and growth, but also the quality of life: physical and mental health, capacity to raise well-adjusted children and ultimately the country's capacity to maintain social order and cohesion.

How well are Canadians coping with change? What is the present state of human development in Canada? What lies ahead?

Canada is now ranked number one in the world on a Human Development Index developed by the United Nations to measure well-being. It is a composite indicator of life expectancy, education and real GDP per capita. The challenge for Canada, looking to the year 2005, is therefore to preserve and strengthen the significant human development achievements of the past and our leading place in the world. We will look at the trends, or pressures, with greatest potential to undermine those achievements.

Emerging Imbalances

Individuals and families organize their lives to carry out a number of key activities that can be summarized under the headings: learning, work, care of dependents and leisure (that is, everything not covered under the other headings). Research studies have shown that the time Canadians allocate to these activities has changed quite dramatically since World War II. Indeed the imbalances of time now given to key activities can go a long way toward explaining many of our most obvious, and apparently intractable, social policy challenges.

Research points to several different types of imbalance in time allocation. At the most general level, we are moving toward an under-allocation in the time our society devotes to paid work relative to the time devoted to non-paid activities (learning, care and leisure). The decline in the relative importance of time spent in paid work reflects several long-term trends, including higher unemployment, more sporadic employment patterns, later entry into the labour market (to allow more time for formal education), and early retirement, including involuntary retirement by older unskilled workers. In the 30 years between 1941 and 1971, the average number of years worked by Canadian men for each year they spent in retirement dropped to 5.4 from 9.4.

Pressure Point

- As a population, Canadians are devoting less and less time to paid work. And the work we do is not evenly distributed — some Canadians have too much work, while many do not have enough.

Although more recent data on years worked per year of retirement are not available, from what we know about recent socio-demographic trends, there is every reason to think that the imbalance in time devoted to paid work relative to non-paid activities will become even more pronounced: the average age of entry into the labour market

continues to rise, while the age of retirement continues to drop. Recently, labour force participation by unskilled workers has declined. As well, the Canadian population has aged significantly since 196 and will continue to age well into the next century, as noted in the section above on demographics.

The relative decline in time devoted to paid work has two critical policy implications. First, it has the potential to create pressure on pension systems, if proposed reforms are not fully implemented. Second, it will limit our capacity to increase the proportion of the population at work, thereby affecting prospects for economic growth, as noted in the section above on the growth challenge.

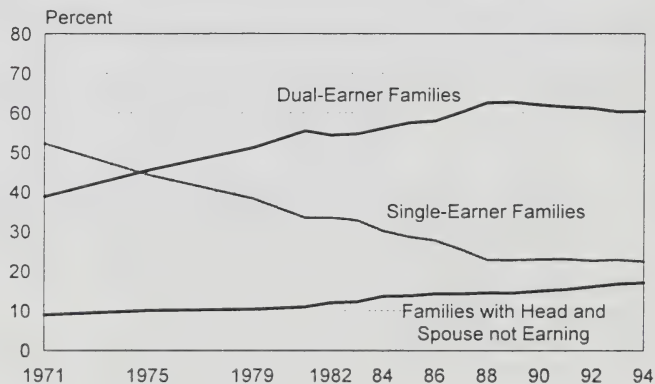
Imbalances have also appeared in the way key activities are distributed among families. Statistics on unemployment and involuntary part-time employment suggest that a growing segment of the population has unwanted leisure. At the same time, another segment of the population is at risk of overwork. Since 1976, the number of persons working both short hours (less than 30) and long hours (more than 50) has steadily increased.

Those working shorter hours tend to be working for low pay, while those working longer hours are more highly paid. Research has shown that polarization in working time has been the critical factor behind growing earnings inequality in Canada.

Finally, we can see the impact of time imbalances at the most micro level in the struggle of families to balance competing priorities day to day. Many working mothers face the bind of combining full-time jobs with the care of young children as illustrated in Figure 15. A significant number of working parents experience "time crunch", with women most likely to report feelings of acute time stress. Researchers have begun to investigate the impact of time crunch on the quality of care received by children, and also by elderly relatives who might formerly have received full-time care from their adult children. In addition, we need to know more about the impact of time pressures on long-term mental health, workplace productivity, availability of volunteers to the civic (voluntary) sector and demand for cultural products. As the skill requirements of the economy change, analysts have also raised the issue of whether working parents will be able to spare the time needed for lifelong learning.

Figure 15

Percentage Distribution of Husband-Wife Families by Earnings Status of Spouses



Source: Based on Statistics Canada data.

Elderly Canadians may experience a different kind of time stress, preferring to shorten their extended leisure time by more active participation in the economy and society. Better health may make this more feasible than in the past. Today, many individuals experience poor health only after age 80; most people in their 60s and 70s share many of the same health and social characteristics as younger adults.

Transitions and Insecurity

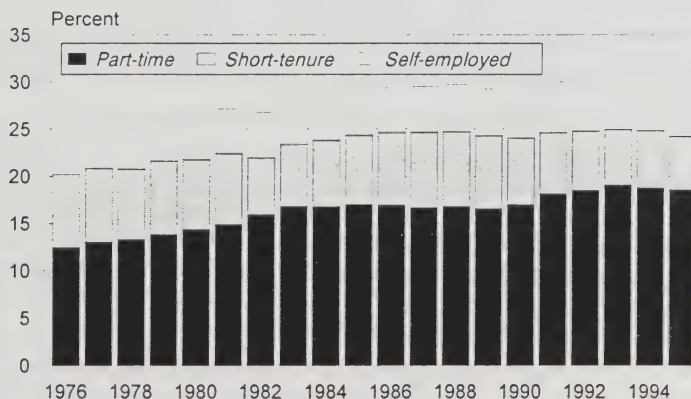
We can also assess how well Canadians are coping with change by looking at key transition points in their life course. In industrial societies, key transitions include home to school, school to work, childlessness to parenthood, from one job to another and from work to retirement. Transition points are critical to human development because each one represents both an opportunity and a risk. Because transitions imply the risk of setback, or failure, they are inherently associated with insecurity. How each transition is managed can, to a great extent, determine long-term outcomes in human development.

What happens to a society in which the pace of transitions — the exposure to risk — is increased? Presumably, the insecurity and anxiety in the population also increases. Research suggests that the pace of transitions in Canada has increased quite dramatically in the past 30 years and is likely to persist, or even increase again, well into the next century.

The explanation for the increased pace of transitions lies in many of the underlying forces outlined at the beginning of this paper. Perhaps most important, the number of transitions required of those in the labour market has increased as jobs become inherently less stable. High unemployment rates are reflected in an even higher rate of indirect exposure to unemployment: in 1993, more than one-third of families with someone in the labour force had at least one family member who was unemployed during the year.

Figure 16

Nonstandard Employment in Canada as a Percentage of Total Employment, 1976-1995



Source: Based on Statistics Canada data.

Other trends suggest that the very nature of work is changing as the workplace is restructured. Figure 16 shows that non-standard employment — usually defined as part-time (voluntary and involuntary), or short-tenured (6 months or less) and self-employment — has gradually increased to 30 percent of jobs from 25 percent over the past 20 years. By far the largest proportion and fastest growth of non-standard employment has been in part-time employment. While most persons working part-time choose that option, an increasing proportion are working part-time involuntarily. The involuntary segment is up to just over 30 percent of part-timers in 1995 from 10 percent in 1976. In addition to being unstable and insecure, non-standard jobs offer poor training opportunities; wages and benefits tend to be low. Chapter 7 on the labour market elaborates on these matters.

Changing labour market and workplace needs also introduce instability in the learning process. The challenge of formal learning is less likely to end in the early adult years, and more likely to be repeated several times throughout life as skills become obsolete.

Changes in the behaviour of families mean that a typical Canadian child will have more parents than in the past and is more likely to divorce, and remarry, as an adult. Increased transitions within families impose more strain on communities and social supports, since marriage and divorce often necessitate integration into a new community and new school, and other changes. To some extent, social transitions act as one of the drivers behind labour market transitions, as employers adjust to changes in the quantity and quality of labour supply.

Other Sources of Insecurity

Public opinion analysts have documented a pervasive insecurity among Canadians, including middle-income persons. In large part, this is caused by the greater exposure to risk accompanying the increased pace of transitions. Other key sources of public insecurity include emerging threats to public health and a perceived crisis in law and order.

i) Public Health and the Health Care System

The socio-economic and physical environments shape public health. On the socio-economic side, housing, income and education are critical. In the physical environment, toxins, microbial hazards and consumer and health care products are important. This shift from a narrow definition of health care to a broad concept of the determinants of health is fundamental to understanding the future course of the health of Canadians and the health system itself.

A key challenge is to anticipate and prepare for a resurgence in infectious diseases. The risks posed by newly-emerging diseases have risen as a consequence of climatic and land-use trends; the risk of these diseases reaching Canada is growing due to the increased flows of people and commerce the world over. A communicable disease outbreak anywhere in

the world could reach Canadians. At the same time, the old infectious diseases once thought conquered are making a return, owing to declines in the health system's capacity to track and control disease outbreaks, declines in living standards (which may foster tuberculosis, for example), and health care practices that have unwittingly assisted in the evolution of drug-resistant strains. Chapter 9 on Health and Well-being discusses these matters.

Technology is advancing faster than society's ability to make wise decisions about its use. Genetic screening and manipulation, end-of-life issues, patenting of higher-life forms and biotechnology pose particular challenges for individuals, society and policy-makers. These advances raise issues that transcend health and safety in the ordinary sense and introduce moral and ethical challenges.

Pressure Point

- While medicare is the top ranked national symbol, it will continue to come under threat and health costs will rise as more and more services are not covered by the Canada Health Act.

A major challenge will be to ensure the sustainability of universal health care. Canadians throughout the country have told opinion pollsters that they value universal health care above all other social programs; a large majority also regard it as a leading symbol of what Canadians stand for.

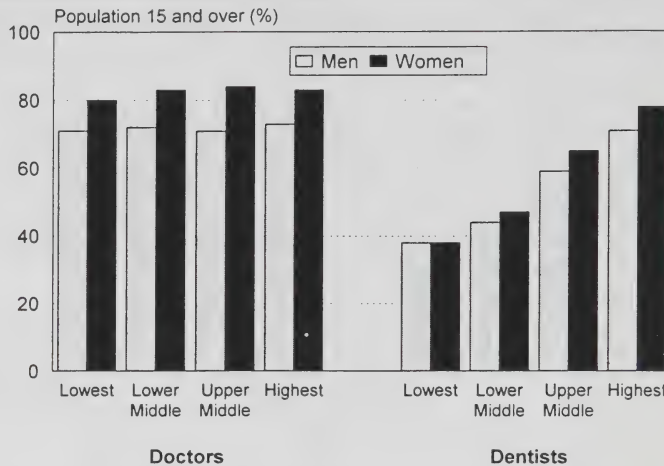
Medicare is nevertheless under attack from a number of quarters that want to see varying degrees of choice between private and public systems. The first response of policy-makers to such pressures must be an attempt to establish the facts in face of what is often written or said about the shortcomings of the present system.

The share of Canada's GDP accounted for by health has been falling since 1993, while health spending in the United States has grown proportionately larger. In 1995, Canada's health expenditures as a percentage of GDP were 9.3 percent down from 10.1 percent in 1993, compared to 14.2 percent for the U.S. up from 13.9 percent in 1993. The pressure to cut public spending in Canada invites growth in private expenditure, whether directly out of the pockets of patients or in payroll deductions for supplementary benefits; this at a time when the private share of Canadian health spending is the fastest growing.

The present challenge is to keep the health care system as public as possible in order to keep costs down and to avoid a situation where services are allocated on the basis of ability to pay rather than need. Figure 17 contrasts medical and dental service accessibility where the latter is largely in the private domain. Control over costs would be difficult to regain once lost and the negative impact on universal access is well documented.

Figure 17

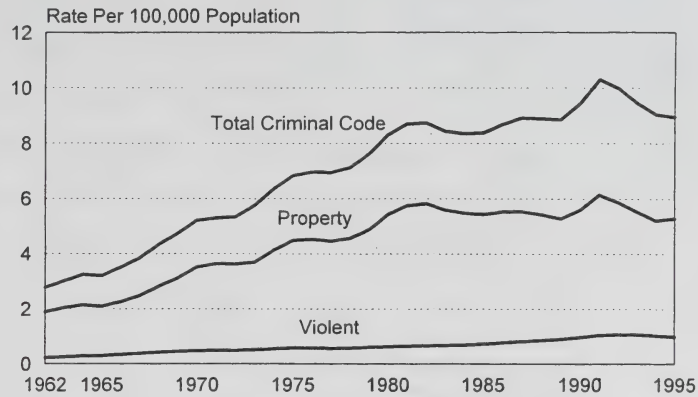
Visited a Doctor or Dentist in Previous Year, by Household Income and Sex, Canada 1994



Since Canadians treasure medicare, diminished federal stewardship in the field of health care, or diminished leverage to uphold the principles of the *Canada Health Act*, would seriously undermine the government's ability to demonstrate its relevance and value to the people. Public monopoly of overall administration, required by the *Canada Health Act*, would appear to encourage cost containment. Canadian health costs are much lower per capita than those of the United States; Canada's total expenditure on health per capita in 1994 was \$2010 compared to \$3516 for the U.S. (in purchasing power parities). A study by two Harvard health economists (Himmelstein and Woolhandler) showed that lower administrative costs account for fully half of the Canadian advantage.

Often the argument that Canada cannot afford the system because of an ageing population confuses the public-versus-private debate with the question of basic changes needed in the system in any case. Population ageing will tend to drive up the cost of health care, since the elderly typically require more medical care than younger people. Research shows that the health system is providing more services to the elderly today than in the past. Increases in service intensity drive up health costs more than does the growth of the elderly population. Population ageing has had only a modest effect on the utilization of medical services — a cost increase of 1 percent a year. But sustained over a long period the impact of such an increase would be significant. As the baby boom generation moves into old age, we will therefore need to be particularly attentive to the type and intensity of medical services they demand and receive. The challenge will be to reorient the system to more appropriate forms of intervention in settings more appropriate to the needs of an ageing population.

Figure 18

Canada's Crime Rate, 1962-1995

Source: Based on Statistics Canada data.

ii) Law and Order

Although violent crime fell by 4 percent in 1995, the third decline in as many years, public anxiety about it is growing. This concern may be reasonable, however, since longer-term trends in crime have been upward; in 1995, the rate of violent crime was 36 percent higher than a decade earlier. The long-range increase in crime rates is illustrated in Figure 18, covering the period from 1962 to 1995.

Public concern about violence increases the pressure on governments to incarcerate offenders, and to extend periods of incarceration, at a time when Canada's incarceration rate is already the fourth highest in the world. The rate of incarceration of aboriginal offenders is more than five times greater than that of the general population.

The rising rate of incarceration is of concern for several reasons. First, it has led to the practice of "double bunking" of inmates, which was virtually unheard of 10 years ago and today affects 4,200 inmates. Double bunking contributes to institutional tension and increases the potential for violence. The implication for public anxiety in communities that include correctional facilities is apparent. Second, in recent years the federal inmate population has grown at a rate of 5 percent a year, or twice the traditional rate. Even at the old rate, Canada's level of incarceration would soon be unsustainable without a significant diversion of funds from other uses. Finally, and perhaps most important, there is no evidence that more incarceration results in less crime.

Pressure Point

- To date, transfers from governments have protected Canadian families from the impact of growing polarization in the labour market. As transfers are reduced, there is the potential for rising inequality, as we have seen in the United States.

Transitions and Inequality

Most Canadians experience anxiety about life-course transitions but manage them well. That is, they arrive at key transition points with the assets and competencies they need to move ahead into different social or economic circumstances. A growing minority, however, is not coping well with change. This unevenness in the ability to cope with transitions is reflected in growing inequality and polarization in market income, as

distinct from disposable income. (Market income includes all cash income, excluding personal transfer payments from governments. Disposable income includes earnings and government transfers, less income taxes.)

Over the decade 1984-1993, real average family market and disposable incomes remained almost unchanged, a sharp break from the significant increases in real income that occurred in the 1960s and '70s (depicted in Figure 9). The degree of disposable income inequality between families was also unchanged in the past decade. However, the stability of disposable income inequality masked a significant increase in inequality in market income. The only reason inequality in disposable income has not increased is that personal transfers from governments, in combination with the effect of the progressive income tax system, have offset the increase in inequality of earnings. (Transfers from government have been more important than the tax system in this equation.)

Pressure Point

- Polarization is growing in the labour market between a core group of highly-skilled workers with good benefits, access to employer-sponsored training and reasonable job security and a peripheral group of workers with low-skills, precarious jobs and poor learning opportunities.

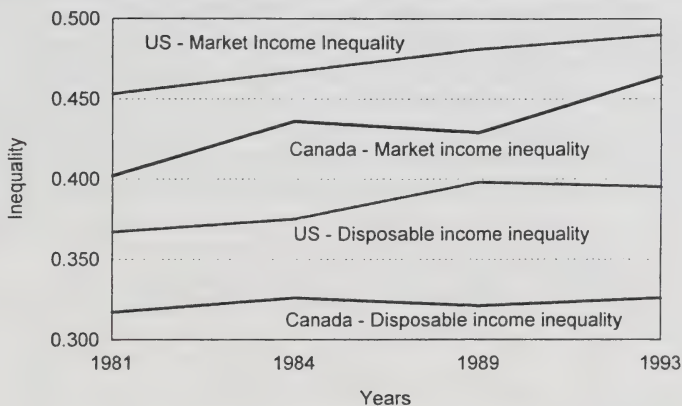
There are several reasons for greater inequality in aggregate family market incomes. In most families, males are the primary source of market income and inequality in male earnings is growing. Research suggests a variety of possible causes, including Canada's greater exposure to world trade and the proliferation of new technologies. Whatever the causes, growing market inequality coincides with an increasing distinction in the labour market between a core group of highly-skilled workers

with good benefits, access to employer-sponsored training, and reasonable job security, and a peripheral group of workers who, on average, are low-skilled and employed in low wage and precarious jobs, with poor learning opportunities. Changes in family composition have also contributed to market inequality. The growing importance of families headed by female lone parents and seniors has meant an increase in the proportion of Canadian families who report little or no market income. Finally, economic recession spurred income inequality: a 3-percent decline in inequality from 1984 to 1989 was more than offset by an 8.5-percent increase in inequality during the downturn of 1989 to 1993.

What is the forecast for inequality? Most observers would say that in addition to current trends in working time redistribution and the growing importance of lone-parent families, recent reductions in personal transfers by all governments in Canada will undoubtedly increase disposable income inequality. However, there is also the potential for reform of government transfer programs to reduce inequality via improved incentives to work, for example, reform of employment insurance and provincial social programs. Research does not yield a definitive prediction, although the example provided by the United States, where pared-back social protection and stronger work incentives have coincided with higher growth and lower unemployment, does not suggest much cause for optimism. Since the 1980s, inequality has increased in the U.S. even during periods of rapid growth. Figure 19 compares the evolution of market and disposable income inequality in Canada and the United States from 1981 to 1993.

Figure 19

***Changes in Inequality*,
Canada Versus the United States***



* As measured by the gini coefficient for households.
Comparable cyclical dates for the US are 1979, 1982, 1989 and 1992.
Source: Based on Statistics Canada data.

What are the Consequences of Inequality?

Analysts are not agreed on the economic consequences of growing inequality. Well-publicized research by Robert Putnam did establish a positive correlation between the degree of social equality in selected countries and regions and their historical capacity for economic growth. Further work is needed, however, to establish both the strength of this relationship and the direction of causality. What part does equality play in determining economic growth? How important is growth in explaining fluctuations in equality?

The social consequences of inequality may depend largely on the nature of inequality over the life course and on who is affected. Increasing market income inequality means that at any given time more Canadian workers find

themselves with relatively low earnings. This may be because more workers are moving in and out of low income situations, or it may mean that the same workers with low incomes are remaining there longer. Under the mobility

Pressure Point

- A growing proportion of children are being raised by only one parent. This increases the risk of their living in poverty and encountering health, educational, and social problems.

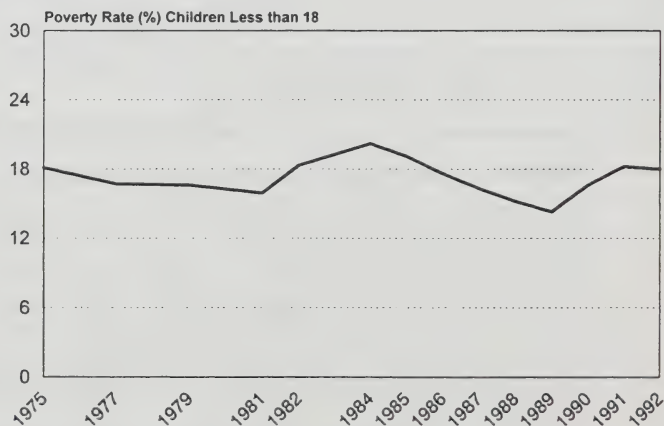
scenario, the nature of inequality has not changed — there is simply more “churning” in the labour market than in the past, albeit with implications for greater public insecurity and anxiety. The stationary scenario does imply that the nature of inequality is changing, by becoming a more constant feature in the life course of those affected. The stationary scenario is ultimately of greater concern, since it would imply

that particular subsets of the population are becoming increasingly marginalized from society. Unfortunately, preliminary longitudinal research appears to confirm this stationary scenario: workers are remaining in the low income state longer than in the past and the probability of moving up the earnings ladder has decreased slightly, in particular for younger men.

The social consequences of inequality also depend on the characteristics of those affected. For example, based on what we know about the long-term developmental consequences of child poverty, the growing market income inequality of families with children is of particular concern. The incidence of low income among Canadian children remains high and has not declined since 1975 as shown in Figure 20. How Canada compares internationally depends on whether we consider measures of relative or absolute child poverty. If we look at relative poverty, or in other words the degree of inequality within countries, Canada does not perform well. However, if we look at absolute poverty by comparing the standard of living between countries Canada does much better.

Figure 20

Children in Low-Income Families, Canada, 1972-1992



Source: Survey of Consumer Finances, public use files.

Research confirms that poor children have poorer health outcomes, reach lower educational levels, live in riskier environments and engage in riskier behaviour than better-off children. We do not know exactly how low income acts on a child's environment to produce poor outcomes. What we do know is not encouraging. An increasing proportion of poor children live in lone-parent families, a family structure that appears to have a negative correlation with child outcomes whether the family is poor or not. As well, research on inequality indicates the duration of poverty could be increasing, and we know that the longer poverty lasts, the worse the consequences. Further discussion of these issues is to be found in Chapter 8 on Individuals and Families Coping with Change.

Pressure Point

- Youth with low levels of education face high unemployment and falling real incomes. Many lack the basic literacy skills needed to participate in the knowledge-based economy.

We would expect the negative consequences of child poverty to be amplified among the Aboriginal population, which is both younger and more economically disadvantaged than the non-aboriginal population.

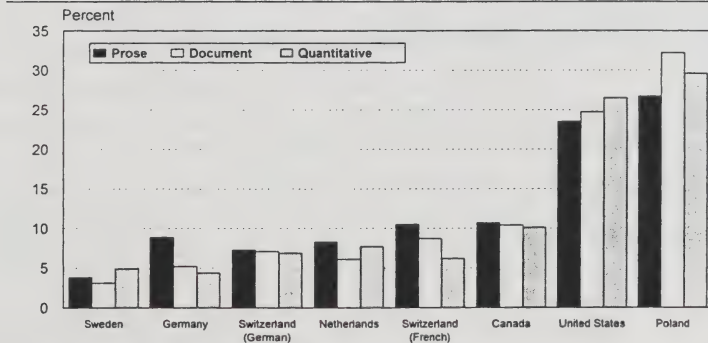
Inequality of market income among youth may have significant long-term implications for labour market attachment, family formation and degree of social integration, including participation in criminal activity.

Educated youth appear to be doing relatively well. Research shows that on average there are increasing returns to

education and experience. For example, unemployment rates for youth with university graduation increased only marginally from 1976 to 1995, while the median earnings of those working full-time two years after graduation have

Figure 21

Proportion of Youth Population (16 to 25) with Low-level Literacy Skills, Various Countries



Source: International Adult Literacy Survey (IALS), 1994

Prose literacy: the ability to understand and use information from texts such as editorials, news stories, poems and fiction.

Document literacy: the ability to locate and use information from documents such as job applications, payroll forms, transportation schedules, maps, tables and graphs.

Quantitative literacy: the ability to apply arithmetic functions such as balancing a chequebook, calculating a tip, or completing an order form.

The IALS measures literacy along a continuum of skills from 1 to 5. Level 1 indicates very low literacy skills, where the individual may, for example, have difficulty identifying the correct amount of medicine to give a child from the information found on the package.

remained the same or risen somewhat. Nevertheless, a university education no longer provides a guarantee of success; we know, for example, that the incidence of low income among university graduates has risen.

The prospects for less educated youth have diminished in recent years. In Canada, roughly 10 percent of young persons enter the labour market with the lowest measurable level of literacy, meaning that they lack the foundation of general skills to learn new ones quickly and adapt to changing requirements. Figure 21 shows the extent of low-level literacy skills in Canada and several other countries. Traditionally, youth with little education were able to enter the labour market in low-skilled occupations and progress to more highly-skilled occupations as they accumulated experience. Research is under way to determine if this pattern of progression is still possible, given what we know about the sluggish growth of middle-level positions in the labour market. If it is not, we risk the long-term exclusion from advancement of a segment of the youth population.

The marginalization and exclusion of the segments of the population we have discussed threatens to weaken the economic future of Canada. The risk is most apparent in the case of children living in low-income families, who will have limited potential. If national economic strategy is to be based on the development of human resources, Canada cannot afford to neglect the potential contributions of a large segment of the population.

Finally, the social consequences of inequality will be profound if economic disadvantage is superimposed on existing social cleavages based, for example, on gender, disability, race, ethnicity or immigrant status.

The next section discusses how socio-economic marginalization may affect Canada's capacity to maintain social cohesion.

What Policy-Makers Need to Know

Although we are beginning to understand some of the complex ways in which human development relates to longer-term social and economic outcomes, there is much we do not know.

Current inability to estimate time allocation accurately and examine changing life paths leaves a major gap in knowledge. The way the whole population allocates time to key life activities affects current and future production, the quality of care provided to dependants, the quality of life of individuals and families, and the strength of local communities. We need to know more about how the allocation of time is changing and what that means for the organization of work, learning, leisure and care activities. In particular, more information is needed on the growing role of the civic-sector economy (voluntary sector) in human development and how it can contribute to successful life-course transitions.

Better information on time allocation and time use is key to a better understanding of the changing nature of the world of work. More needs to be known about individual and family preferences in balancing education, work and family. Also, policy-makers need to understand to what extent increases in non-standard work correspond to a long-term trend, rather than being cyclical. This knowledge is essential to the design of effective economic and social policy, especially in the fields of income security, education, the labour market, and pensions.

We need to construct better social indicators to measure and monitor social and human development. We need better ways of measuring well-being and collecting information on social outcomes. Research on measuring insecurity and its impact on family functioning appears essential.

Research has made clear the importance of successful life-course transitions, in particular for children entering school, youth going to work and workers retiring. For children, we know that poor transitions result in poor long-term outcomes, but we know little about the specific pathways that determine whether a preschool child will adapt successfully. How the time crunch on the family affects the quality of care for children is a key area for more research.

For youth, we need a better understanding of the pattern of progression from school to precarious labour market status, to entry jobs, and to middle-level positions in the labour market, so as to remove the risk of permanent exclusion of a segment of the youth population.

We need to have a better understanding of both the causes and consequences of growing inequality of earnings. Further research on the economic and social consequences of inequality, as well as research on the payoff on public policy to reduce inequality, would help policy-makers to decide whether current public investments, in particular investments in children and youth, are appropriate and adequate.

Several areas of potential crisis will need to be carefully monitored. These include the impact of population ageing and privatization of the health care system, the risk of a return of communicable disease epidemics, the ethical issues arising from the use of new medical procedures and biotechnologies, and the long-term trend in the rates of both crime and incarceration.

Social Cohesion

Participants in international and Canadian policy debates commonly assume that social and economic progress in a country or community is fostered by social cohesion. Such linkage is clearly in reverse in societies where a lack of social cohesion results in violence and a breakdown of social order incurring heavy social and economic costs.

Empirical research on the concept of social cohesion — what it is, how it can be measured, how it affects social and economic progress — has, however, begun only recently. The discussion here is therefore tentative; the evolution of social cohesion in Canada cannot be predicted with any degree of precision. But policy-makers should be aware that social cohesion could in the future impose a constraint on our capacity as a country to deal with the significant social and economic challenges described in the preceding sections of this paper. Chapter 11, the issue paper on “Identity, Culture and Values”, provides a more detailed discussion.

Pressure Point

- An inclusive Canadian identity is being weakened by forces that are eroding the traditional Canadian symbols and institutions that have historically helped to promote a sense of common purpose. Without a renewed commitment to our shared values and our future together, Canada's social and political fabric may begin to unravel.

What is Social Cohesion?

Social cohesion may be defined as involving building shared values and communities of interpretation, reducing disparities in wealth and income, and generally enabling people to have a sense that they are engaged in a common enterprise, facing shared challenges, and that they are members of the same community (Judith Maxwell, “Social Dimensions on the Economic Growth”).

Using this definition, to what extent does social cohesion exist in Canada? Do we have shared values and a sense of common purpose?

Looking to the past, most observers would say yes. In the 19th century, settlers to Canada shared the dream of linking the colonies north of the American border, and they proceeded to build a railway and to forge east-west commercial ties. In the 20th century, the experiences of the Depression, World War II and the economic boom that followed prompted a national effort to build a distinctive safety net of social programs.

Looking at the present day, the answer is more ambiguous. There is clearly no commanding national project underway in Canada today that can compare to construction of the railway or the social safety net. Yet, even if we cannot identify a single common purpose, analysts of public opinion argue that we do share common values and that these values have been remarkably stable over time. In a recent synthesis of qualitative and quantitative opinion research, Suzanne Peters identified the following core Canadian values: self-reliance, compassion leading to collective responsibility, investment in children, democracy, freedom, equality and fiscal responsibility. These values have not changed dramatically over time, although the way Canadians wish to see them expressed in programs and policies has changed considerably.

Figure 22

Symbols of Canadian Identity

Very Important April 1996

	Quebec	Rest of Canada
Health care system	70	86
Charter of Rights and Freedom	56	70
Bilingualism	54	28
National parks	46	68
Historic sites	43	63
Olympic athletes	38	48
Canadian flag	36	73
Canadian literature and music	36	49
National anthem	34	70
Canadian theatre and films	29	39
CBC	28	32
Multiculturalism	26	40
RCMP	23	63
Hockey	17	34
The Queen	4	18

Source: Environics Research

At the same time, analysts who have studied Canadians' attachment to national symbols caution that we are increasingly unable to agree on symbols that might express our shared values. Medicare has become our most important national symbol. Others, such as the Charter, the flag and the national anthem, still resonate with a majority of Canadians, although they are of less importance to many residents of Quebec, as indicated by the opinion-survey results presented in Figure 22.

Social Cohesion in Canada 2005

Will we remain a cohesive society? Our historical experience of shared hardship, successful national projects and shared social values provides a solid foundation on which to build. Ultimately, the answer will depend on the capacity of social institutions, in particular governments, to build consensus around a new definition of our common purpose — a new vision of our society — that reflects the significant economic, social and demographic changes under way.

The remainder of this paper is devoted to a brief description of the factors that could undermine or, conversely, reinforce Canada's capacity for social cohesion. This paper does not deal with the most obvious impediment to the construction of a common purpose, namely the aspiration of the present Government of Quebec and its supporters to construct their own national community, apart from Canada. Furthermore, there is evidence that all Western societies are struggling to maintain social cohesion, suggesting that generalized, non-Canadian factors may be at play; but no attempt is made here to differentiate between Canadian trends in particular and trends of the times in general.

Polarization and Exclusion

The growing inequality of earnings in Canada, outlined in the preceding section, runs against “reducing disparities in wealth and income”, one of the components of the definition of social cohesion. This is compounded by evidence that it is becoming more difficult for those at the bottom of the income scale to move up. The negative effect of the marginalization, or exclusion, of individuals from the mainstream of society on the prospects for social cohesion seem obvious; exclusion will breed resentment and disaffection, add to the potential for hostility and crime, and hence undermine cohesion. Where earnings polarization coincides with longstanding social or political cleavages between the mainstream of society and an identifiable sub-population, there is the greatest potential for weakening social cohesion. Two of these flashpoints could be Aboriginal people and youth, according to the analysis in the preceding section.

Pressure Point

- The exclusion of young Canadians, and in particular Aboriginal youth, from the mainstream of society increases the potential for hostility and crime.

The social and health pathologies that afflict Aboriginal communities are contributing to increasing levels of stress and conflict, both on-reserve between young Aboriginals and their leaders, and in cities, between the Aboriginal and non-Aboriginal populations. Tension between Aboriginal and non-Aboriginal people is most apparent in western cities, where Aboriginal youth gangs have begun to appear, as outlined in Chapter 10 on Aboriginal Issues.

In view of what is known about the polarization of income and opportunities based on age, analysts have raised the possibility that the traditional generation gap between young and old is widening. The OECD has noted the potential of intergenerational inequities to undermine social cohesion, in particular in communities with large proportions of wealthy retired people.

Rural-Urban Cleavage

Polarization and exclusion, the creation of a “have and have-not” society, has a geographic as well as socio-economic dimension. In the movement towards a knowledge-based economy, new centres of growth are emerging while some regions and communities are becoming marginalized. The continuing shift in economic and political power from rural to urban Canada will increase the vulnerability and marginalization of small and relatively isolated communities. On the other hand, the advent of the new knowledge-based economy presents opportunities to reduce differences within and between regions. For example, information technologies present an opportunity to break down distance barriers — location is becoming less important as the Internet and electronic commerce decrease dependence on location based transactions.

Pressure Point

- Investing time, money and energy in their communities helps people to define common goals and shape their own destinies. Because of increased pressures on the middle class, a shift in values toward growing individualism among all Canadians, and marginalization of growing segments of the Canadian population, fewer people are able and willing to invest in social capital. Yet such investments are becoming more important as governments withdraw services.

Social Capital

The concept of social capital implies that people who get to know one another — who develop networks, norms and trust — are better able to see beyond their particular individual interests and work together toward common goals.

Social capital may be developed within families, religious communities, ethnic groups, the workplace, neighbourhoods, and so on. Robert Putnam has studied one form of social capital, namely civic participation, and its link to social and economic well-being. He has concluded that strong traditions of civic

engagement — voter turnout, newspaper readership, membership in community associations and recreational organizations — are the hallmarks of social cohesion and, in turn, economic progress. In Putnam's view, the presence of social capital is a better indicator of progress than more obvious factors such as government organization, political harmony, demographics, or affluence.

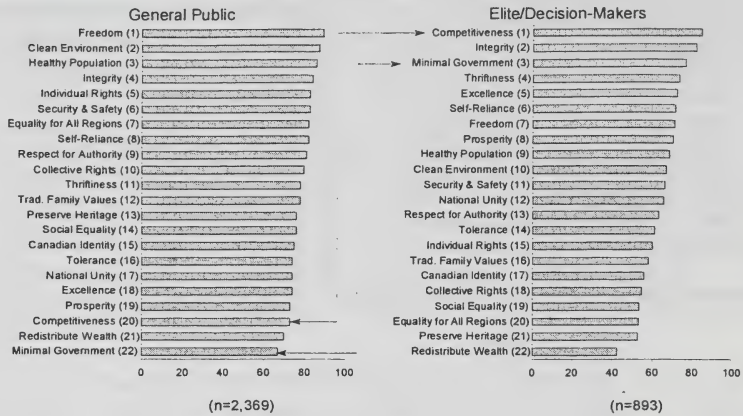
Putnam and others have documented a significant decline in social capital in the United States over the past quarter century. The causes are not well understood, but may include the "time crunch" that confronts single parent and two-earner families and the social isolation accompanying the advent of television and other home entertainment.

The nature and evolution of civic engagement in Canada have not been studied extensively, although some analysts have provided anecdotal evidence that the base of social capital in Canada has been eroded over the past 10 years by the effects of unemployment, plant closures, growth in non-standard work, and government cutbacks in social expenditures. The relationship between social capital, social cohesion and social and economic progress deserves further study.

Public-Elite Disconnection

In their 1994 report on "Rethinking Government", Ekos Research reported a "normative rupture" between average citizens and the elite, or "those running the show", in their core values and ultimate goals. For the general public, values tend to be dominated by idealistic concerns and focused on the notions of security and moral community. For elites, core values tend to be less idealistic and dominated by concerns about the economy and competitiveness. The contrast is shown in Figure 23.

Figure 23

Public-Elite Disconnection - Values and Goals

Ekos Research Associates Inc.
Les Associés de recherche Ekos Inc.

Rethinking Government 94
Repenser le gouvernement 94

We do not yet understand the practical implications of this rupture for maintaining social cohesion. At a minimum, it will complicate the task of building consensus around a new common purpose, in particular if the public perceives this purpose to have been created by a disconnected and self-interested elite.

Cultural Diversity

Diversity has always been a feature of the Canadian population. In recent years, changes in the levels and pattern of immigration have accelerated the rate of change in ethnicity, religion and culture, particularly in large urban centres, as noted in this chapter's opening discussion of underlying forces.

What do these trends imply for social cohesion? The answer depends on the process by which immigrants are integrated into society. If the public is tolerant and accepting of newcomers, growing diversity will be viewed as advantageous, particularly in a globalized economy. If the public is racist or intolerant of change, growing cultural diversity will undermine social cohesion. The ease of social integration will also depend on the capacity and willingness of immigrants to participate in the formulation of shared social values and common enterprise within Canada.

Recent opinion research has shown that Canadians are committed to equality, but at the same time perceive immigrants as an economic threat. Unfortunately, there is little available research that can help predict how

public tolerance and acceptance of immigrants will evolve. The state of the economy appears to be a determinant, with less support for immigration during downturns.

Canadian Culture in an Information Society

In the past, Canadian cultural products have been important in promoting the sharing of information and common understanding. The European Commission has acknowledged that culture and cultural industries will be important in creating a sense of community in the global information age.

New interactive information and communication technologies are changing the way we produce and consume cultural products and services. The consumer gains the opportunity to also act as producer of a unique cultural product. This increased flexibility has the potential to enhance our common understanding by

- ☐ reducing the cost of preserving diversity,
- ☐ offsetting the tendency toward cultural standardization, and
- ☐ reinforcing local cultures and building bridges across cultures and regions.

At the same time, analysts have noted that the traditional mass media — radio, television, newspapers and magazines — may no longer be able to reach a pan-Canadian mass audience as growing numbers of relatively affluent consumers gain access to the 500-channel universe, CD-ROMs and the Internet. They have warned that mass media could find their audience limited to the lower end of the socio-economic scale — people who may be excluded from the new technologies or resistant to them. This would be part of the larger “have and have-not” spectre of the information society, already discussed in connection with employment, inequality of earnings, and urban-rural cleavage.

Pressure Point

- Globalization and advanced communications are fragmenting “Canadian voices” — the varied forms of cultural expression that have traditionally helped to shape Canadian values and promote social cohesion. New media can provide opportunities in the global marketplace of ideas, but only if all Canadians have access to the Information Highway and are active producers as well as consumers of its content.

Ownership of cultural industries will remain a concern as American-owned mass media continue to make inroads. English-speaking Canadians already lead the Western world in the extent to which they consume more foreign than domestic entertainment products and services. Yet, global communications and expanded travel provide unprecedented opportunities to share Canadian values and unique perspective with each other and the rest of the world. Globalization and the emerging strengths in the Canadian cultural industries raise questions about what policy instruments are most appropriate for developing Canadian culture.

What Policy-Makers Need to Know

Given the potential for a lack of social cohesion to undermine both social and economic well-being, more empirical research is needed on the present state and prospects of social cohesion in Canada.

We know that socio-economic polarization has resulted in the exclusion of some individuals, in particular unskilled youth and Aboriginal Canadians, from the mainstream of society. At the same time, spatial polarization has isolated some regions and communities from the centres of economic growth. Policy-makers need to know more about the implications of both types of polarization for social and political stability.

We need better ways of measuring and monitoring the impediments to social cohesion outlined above: the breakdown of the networks and trust that enable communities to work together (social capital); the normative rupture between average citizens and the elite in their core values; growing cultural diversity; and the diffusion of new information and communication technologies. Most important, policy-makers need to understand the risks and opportunities inherent in each of these trends in order to craft policies that reinforce social cohesion.

Conclusion

The Policy Research Committee has found that Canada faces three overarching socio-economic challenges over the next decade: economic growth, human development and social cohesion. While these challenges are not unique to Canada, the approach we take in addressing them will be influenced strongly by the history and distinctiveness of our country.

The potential medium-term economic growth path under current assumptions is not sufficient to make a dramatic reduction in the jobless nor return us to a situation of steadily rising income for most Canadians. This may well compound the already troublesome shift towards more inequality in opportunities for Canadians and aggravate the unsettling fault lines in social cohesion which are becoming more and more evident.

This report underlines interdependence in policy-making: social objectives cannot be pursued independently of economic capacity; and, economic recovery cannot be sustained without progress on problems of human development and social cohesion. The pursuit of each will affect the other and therefore the whole must be approached in an integrated manner. The interrelationships are many and complex, and several research gaps need to be closed to obtain a clear picture of them.

The global rush toward a more knowledge-based economy, in both high technology and traditional sectors, has major implications for our economic and social development. Canada's degree of success in making the transition will depend on how well individuals, firms, governments and other institutions manage knowledge. A new kind of infrastructure is required to support the creation, diffusion and effective application of knowledge. Further institutional change will be required.

We have shown that greater attention to human development, especially acquisition of knowledge and skills, and generally the ability of individuals to learn, is central to our long-run economic growth and competitiveness. The somewhat daunting challenge we face is ensuring that all members of society are given the opportunity to participate fully in the economy. A healthy, civil society is a more productive society. Those individuals currently excluded from the workforce must position themselves to enter into, and remain in, the workforce. We must also promote lifetime learning opportunities for those individuals currently in the labour force. And our "best and brightest" need to be competitive with their counterparts in other countries and they must be encouraged to stay in Canada. A more active learning society should be our goal.

In our federation, however, significant aspects of human development are in provincial jurisdiction, while principal macro-economic and many microeconomic levers are federal. This suggests that no amount of disentanglement or elimination of overlap and duplication between the federal and provincial governments will remove the need for assuring that federal and provincial policies are complementary. At present, Canada lacks both the institutions and the culture that would make more intense collaboration workable. Failure to achieve greater federal-provincial collaboration would make it difficult to deal effectively with the pressure points highlighted in this paper.

Part



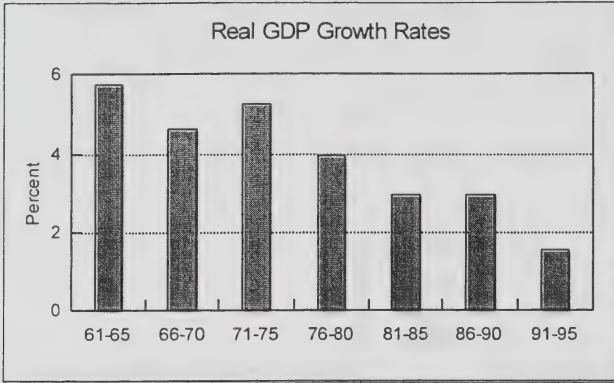
Research Building Blocks

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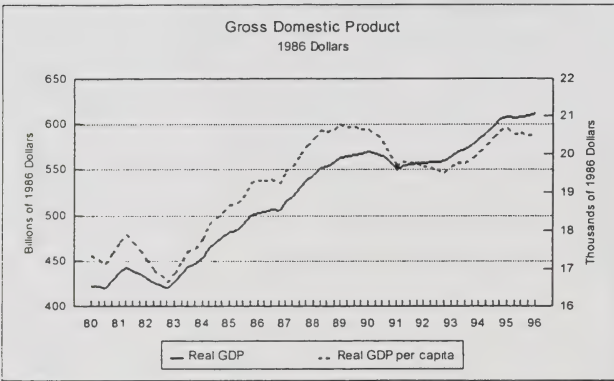
Megatrends

Macro Economic Trends

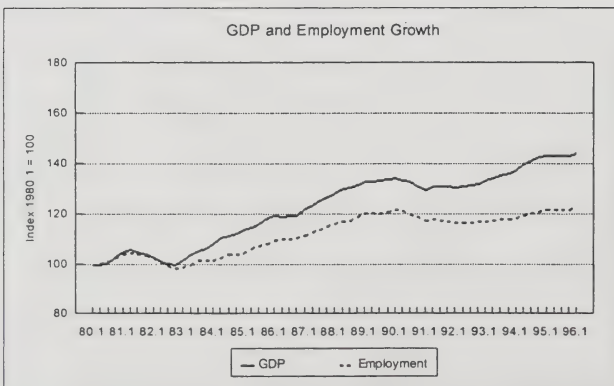
Economic Growth has been Declining since the 1960s, Recent Growth in GDP Per Capita has been Negligible, and Employment has Stagnated since the late 1980s



- Growth rates of real GDP have declined over the past three decades and show no signs of returning to pre-OPEC levels.



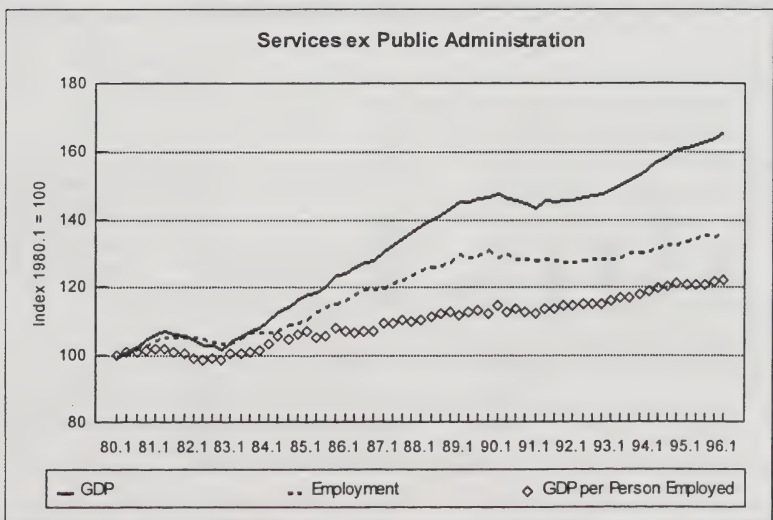
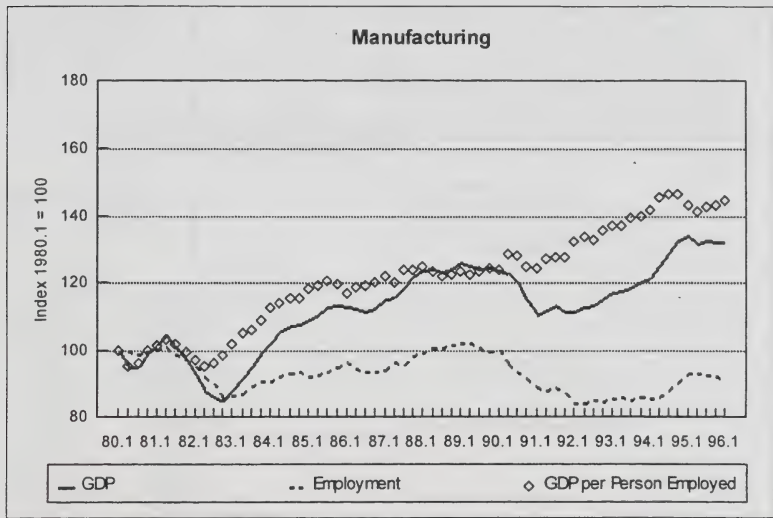
- Since declining during the recession of the early 1990s, GDP has grown to surpass pre-recession levels, but GDP per capita has not done so.



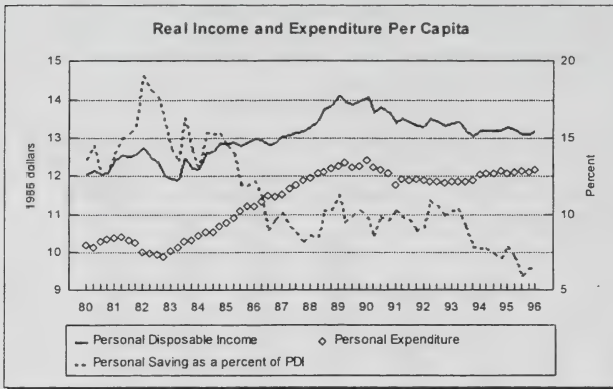
- During the 1980s, both GDP and employment recorded strong rates of growth. In the 1990s, GDP has grown but employment growth has been much weaker.

In The Longer Term Canadian Standards of Living Depend Upon Rising Productivity

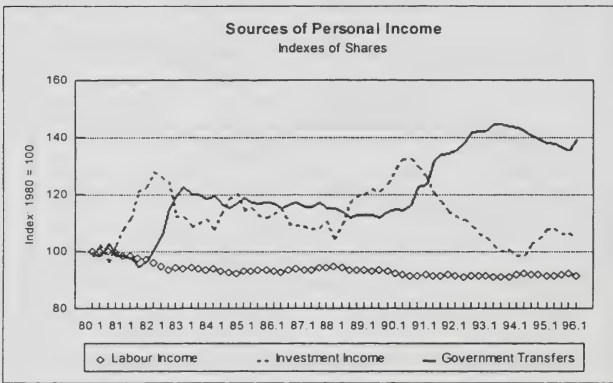
- ❑ Over the last fifteen years employment in the services sector has grown more rapidly than in the goods sector. The goods sector, however, has recorded significantly stronger growth in labour productivity over the same time period.
- ❑ Restructuring within the manufacturing sector since 1989 has led to large increases in labour productivity after a hiatus in the mid-1980s. Manufacturing is also prone to greater cyclical volatility in both output and productivity.



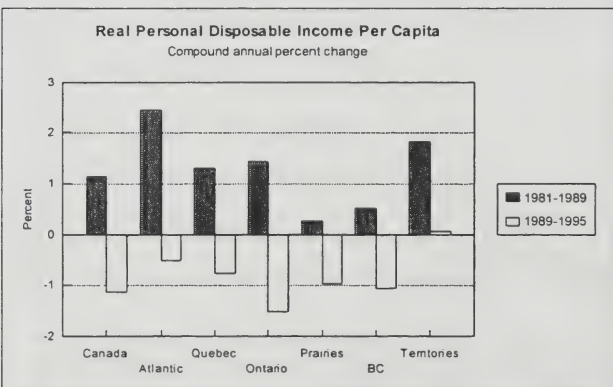
Recent Poor GDP Growth has been Accompanied by Stagnant Personal Incomes and Expenditures



- Real personal income per capita has declined steadily from its pre-recession peak in 1989. Real expenditure per capita has also been weak, but has not declined as much as personal income. Consumers have maintained expenditures by dramatically reducing their savings rates.

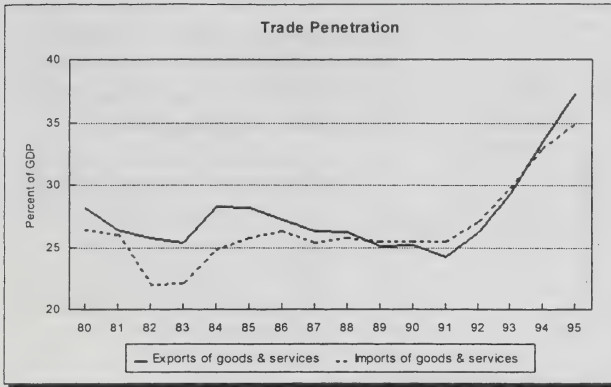


- Since the early 1980s, personal income levels have increasingly come to rely on government transfers. The share of these transfers increased sharply during the early 1980s recession and then declined very slowly thereafter. During the recession in the early 1990s, the share provided by these transfers again rose sharply, peaking during 1993, but declining very slowly since then.

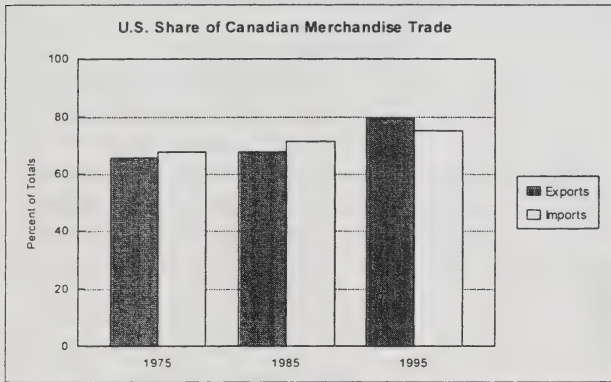


- The weakness in personal incomes in the 1990s has been widely shared among the provinces.

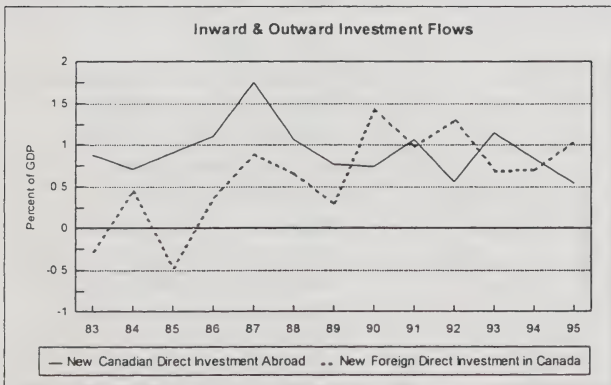
Canada's Economy Has Become More Integrated With the International Community, Particularly With the United States



Trade liberalization has led to a sharp increase in both exports and imports as a percentage of GDP. These developments are evident both in nominal dollars and real dollars. The increase in trade relative to GDP is indicative of the degree of industrial restructuring, but not necessarily of net gains in output or employment.



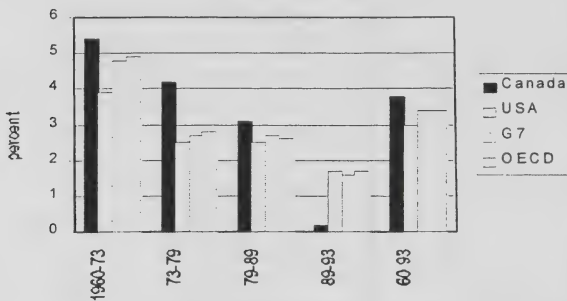
The increase in trade flows has occurred primarily with Canada's major trading partner - the United States. As a result that country now takes almost 80% of Canada's exports of merchandise in nominal dollars.



Increases in trade flows have been accompanied by an increasing flow of new foreign direct investment into Canada, even relative to GDP. Canadian direct investment abroad has been relatively stable over that time period. Inward and outward flows of new direct investment have been about equal during the 1990s.

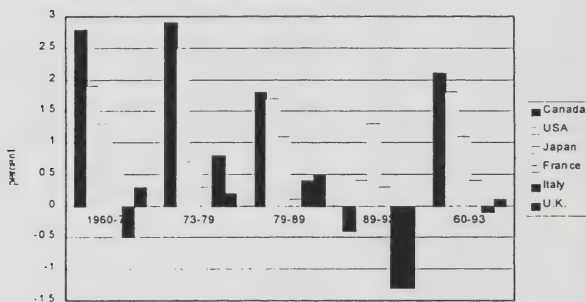
By International Standards, Canadian Growth Rates for GDP, Labour and Capital Have Been High, until the Recession of the 1990s

Real GDP (average annual rates of change)



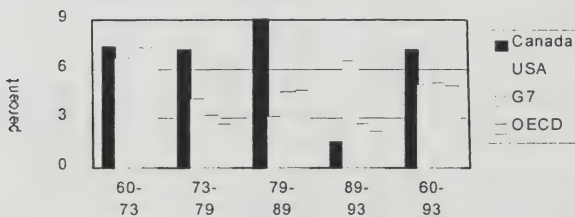
- Overall growth in Canadian GDP has been consistently higher than that of the United States and other OECD countries since 1960. Annual GDP growth averaged 3.9% in Canada between 1960 and 1993, as opposed to 3.4 percent in the OECD. The recent recession, however, has left Canada behind.

Employment Growth (average annual rates of change)



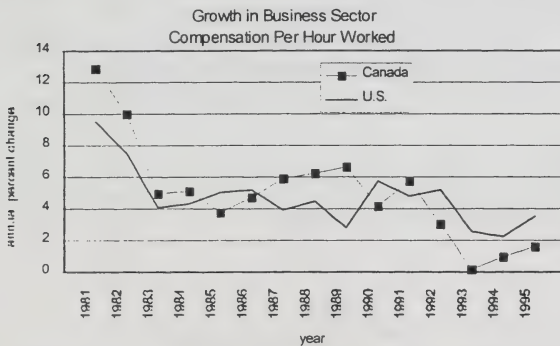
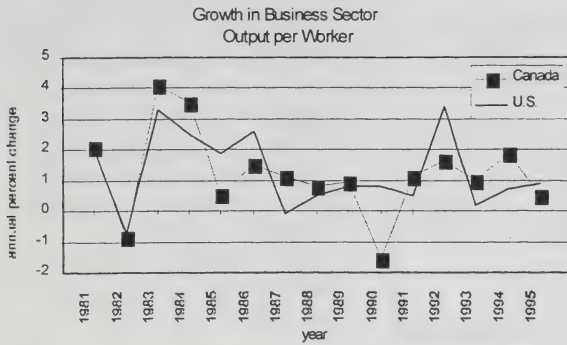
- Canada has also outperformed the US and other OECD countries with regard to employment growth. The differences in the performance of Canada and other countries are generally larger than for GDP growth. Once again, the 1990s recession was accompanied by a substantial deterioration in Canada's relative performance.

Gross Fixed Capital Formation in Machinery and Equipment (average annual rates of change)

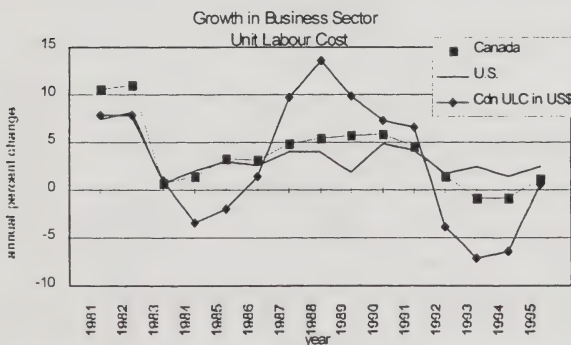


- Increases in real investment in machinery and equipment have also been generally larger in Canada than elsewhere in the OECD, though Canada's relative performance was once more dramatically affected by the 1990s recession. Since 1979, Canada's investment growth was more dynamic than its employment growth relative to other countries.

Canada's Competitive Position in Labour Costs Relative to the United States does not arise from any Productivity Gap, but from Adverse Exchange Rate Movements



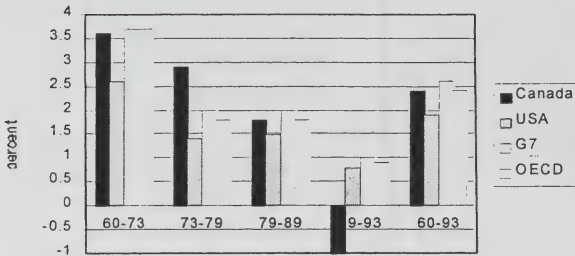
- ☐ The competitiveness of Canada with respect to labour costs depends on our relative labour productivity (output per worker), relative wage costs, and the exchange rate.
- ☐ Canadian output per worker in the business sector has grown at about the same rate as United States output per worker. Over the period from 1981-95, annual rates of change of output per worker in the business sector were above those of the United States more frequently than they were behind.
- ☐ The wage rate of workers in Canada has not increased more than in the United States. The growth in compensation per hour tracks that in the United States closely. In the late 1980s, it was slightly higher; in the 1990s, it has been slightly lower.



- ☐ Changes in unit labour costs are determined by changes in both labour productivity and wage rates. Changes in Canadian unit labour costs, when expressed in Canadian dollars, track those of the United States when expressed in American dollars. This is not the case when the two are expressed in the same currency. Variations in the exchange rate are primarily responsible for gaps appearing in our labour cost competitiveness--not failures to increase labour productivity in line with that of our major trading partner.

Canadian Productivity Growth Has Also Been Good By International Standards

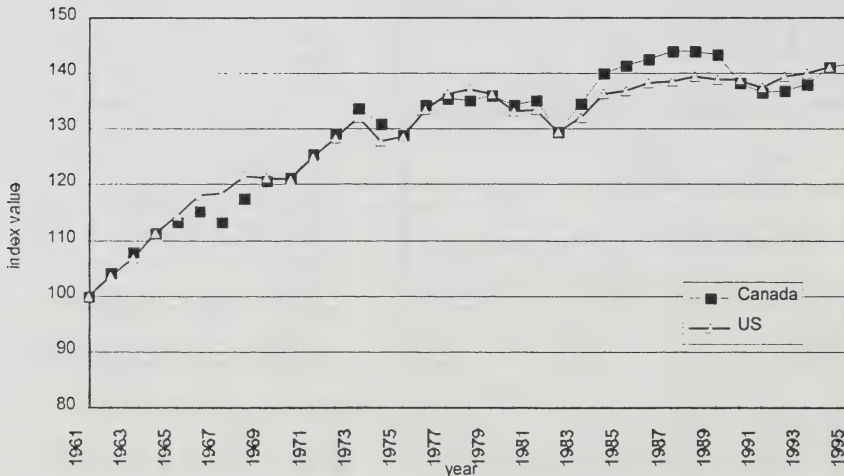
Real GDP per capita
(average annual rates of change)



□ A comparison of GDP per capita growth rates of Canada and OECD countries shows that Canada has generally outgrown its major trading partners since 1960 in this measure of economic well-being. The recent recession, however, has been accompanied by inferior performance on the part of Canada.

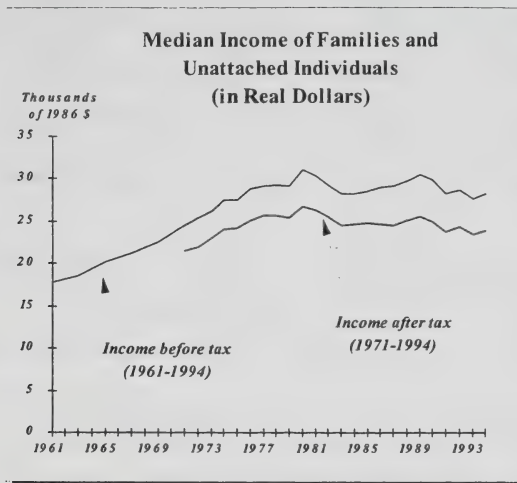
□ Underlying the growth in GDP per capita are changes in the productivity of Canadian industry. The broadest general measure of productivity improvement--multifactor productivity--shows that Canada is doing just as well as its major trading partner--the United States

A Comparison of Multifactor Productivity Rates Between Canada and the U.S.



Income & Employment Trends

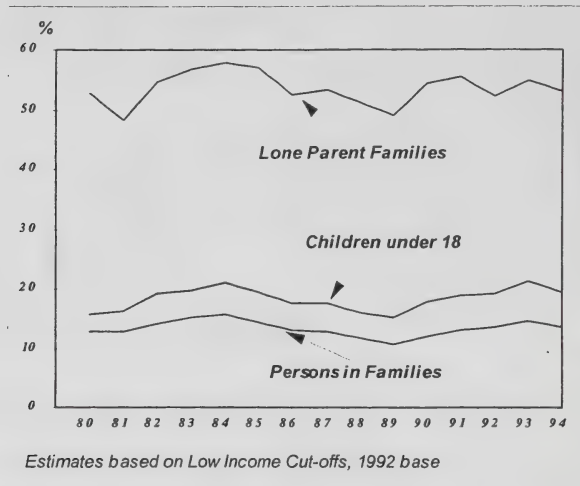
Family Income Has Been Stagnant Through the 1980s and 1990s



- ☐ After rapid growth in the 1950s, 1960 and 1970's, the median income of families and unattached individuals peaked in the early 1980s. It has followed the business cycle since then, with no overall growth.
- ☐ Since steady income growth was the norm until about 1980, considerable stress may result from the need to revise expectations regarding future family income levels.
- ☐ The stagnation in the incomes of families and unattached individuals has occurred in spite of the increase in the number of two earner families.
- ☐ The gap between before and after tax income has increased slightly. Personal income taxes as a percentage of total family income rose from 16% in 1984 to 20% in 1994. Expressed differently, the average family tax bill increased from just over \$8,000 in 1984 to nearly \$11,000 in 1994 (measured in 1994 dollars).

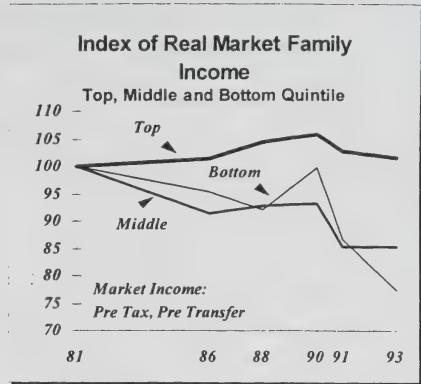
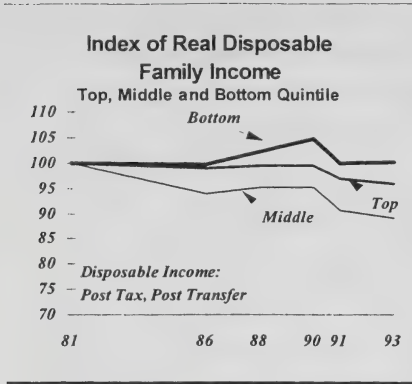
Contrary to Popular Belief, the Incidence of Low Income Has Not Increased Among Children or Families in Canada

The Incidence of Low Income Among Families and Children



- ☐ However, the low-income rate remains very high among lone-parent families. Furthermore, the depth of low-income is greater among female lone parent families than other groups.
- ☐ The stability of low-income among children is the product of offsetting underlying trends, trends which cannot be counted on to continue. Many of the families of these children experienced declines in employment earnings which would have put them into low-income situations had the lost earnings not been offset by increases in transfer payments. In other cases, erosion of family earnings was avoided by increases in the number of adults working. Finally, on average the number of children per family declined.
- ☐ Given that female labour force participation rates are no longer increasing and given the impact of fiscal restraint on the transfer system in the future, low income among children bears monitoring.

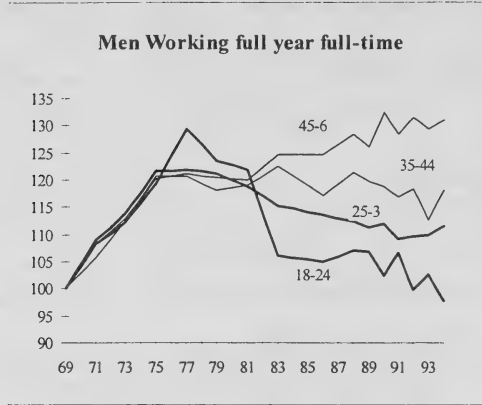
Inequality in Disposable Family Incomes Has Not Risen in Spite of Growing Inequality in Market Income



- ☐ Average real disposable (i.e., after tax and transfers) family income has remained stable for the poorest families over the 1980s and early 1990s, while declining for middle income families. This is not a story of rising family income inequality, unlike the U.S., where inequality in family income has increased significantly since the late 1970s.
- ☐ If transfer payments are excluded from family income, and pre-tax market income alone is considered, there has been an increase in inequality. The market income of the families in the bottom quintile fell while it rose slightly among top income families. The transfer (and to a lesser extent tax) system offset the rising inequality in market income, resulting in no increase in inequality of family disposable income. Poorer families depend to a considerable extent on transfers, and this is increasing as market earnings decline. Government transfers accounted for 67% of the income of the poorest one-fifth of families and unattached individuals in 1994, up from around 58% in the early 1980s.
- ☐ The increases in the inequality of market income can largely be attributed to increases in the inequality of individual earnings, particularly among males. This rising inequality of **annual** earnings is, in turn, due to hours of work becoming more polarized. Fewer Canadians are working a regular 35 to 40 hour week, and more are working either shorter or longer hours. This has contributed to rising earnings inequality because lower paid workers tend to be working shorter hours, and the more highly paid longer hours.
- ☐ Real earnings of lower paid male workers have declined through the 1980s. Evidence suggests that the growth in earnings inequality has slowed in the 1990s, but the reasons for the rise and subsequent slowdown are not well known.

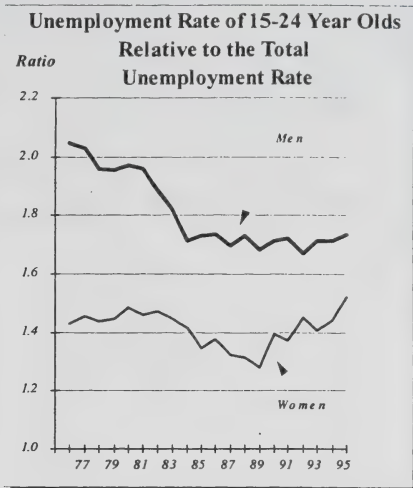
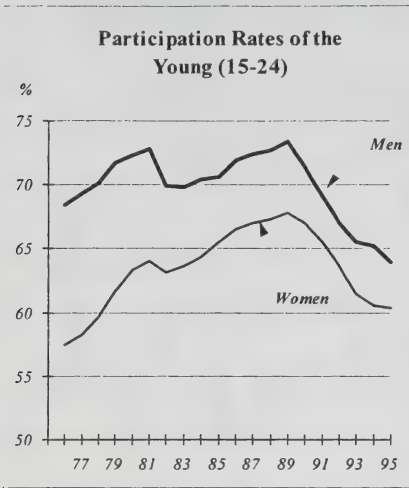
One Aspect of Rising Inequality Has Been the Declining Earnings of Younger Men

Indexed real annual wages and salaries of workers employed full year full-time, (1969=100)



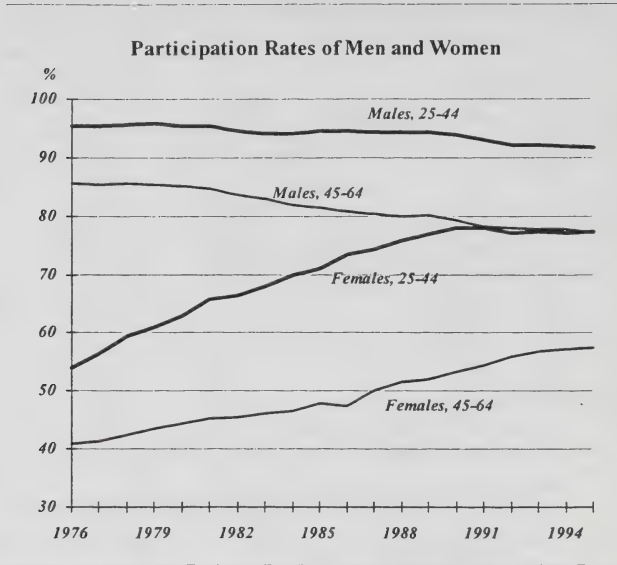
- ☐ During and after the 1981-82 recession, annual earnings of various age groups diverged for both men and women. This has meant declining real earnings for male workers under age 35.
- ☐ This decline in earnings of younger workers was widespread, occurring in most industries and occupations. It also occurred in most western industrialized countries.
- ☐ For younger women, the decline was not as severe and some of the losses have been recouped since the late 1980s.
- ☐ Declining earnings among those with jobs is one dimension of a deteriorating labour market for young men; the proportion employed is also falling.

Fewer Youth Are in the Labour Force While More Are Staying in School



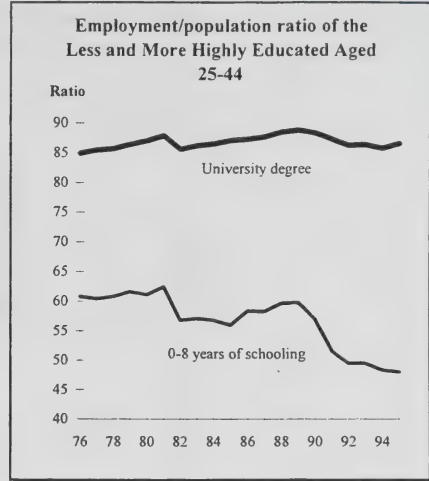
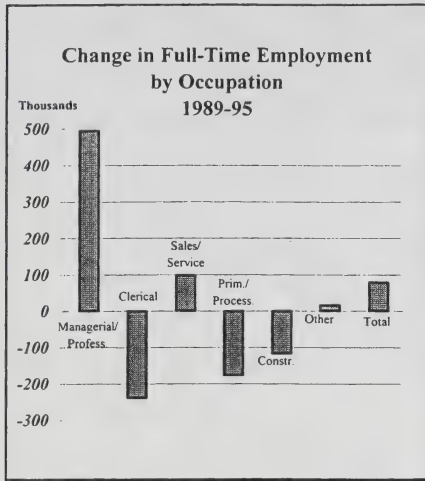
- ☐ Since 1989 two trends have dominated the picture for youth. They have been staying out of the labour force and they have been staying in school.
- ☐ The proportion of youth in the labour force has fallen precipitously since 1989: 10 percentage points for men (to the lowest rate since before 1970) and 7 for women. This is largely a student phenomenon since the labour force participation rate for non-students fell only 3 percentage points. In other words, students are now much less likely to combine school and work.
- ☐ The impact on the overall participation rate is magnified by the fact that ever more young people are staying in (or returning to) school. From 1989/90 to 1995/96, the proportion of 15 to 24 year olds in school increased from 52 to 60%.
- ☐ While poor prospects in the labour market may be prompting young people to stay in school, the resulting improved educational attainment is what good future job prospects demand.
- ☐ The youth unemployment rate has always been higher than average but the **relative** unemployment rate of young males (relative to all workers) has not risen, probably in part due to the declining participation rate.
- ☐ The labour market experiences of youth would likely have been worse had the youth population not declined in the late 1980s and barely grown in the 1990s.

The Decline in Participation of Canadians in the Labour Market (and in Employment) is Not Restricted to Young People



- ☐ The proportion of older males (over age 55 in particular) participating in the labour market has been falling since the late 1970s. However, more recently this trend has been observed among males under the age of 44.
- ☐ And as the male rate is falling, the growth in the female participation rate has stalled in the 1990s, after several decades of continuous growth. Participation rates among women aged 25-44 have stabilized since 1989, the last business cycle peak.
- ☐ The changing participation rates mean that the proportion of males employed has fallen, while the share of women in jobs has stabilized in the 1990s. The reasons for these trends are not well understood.

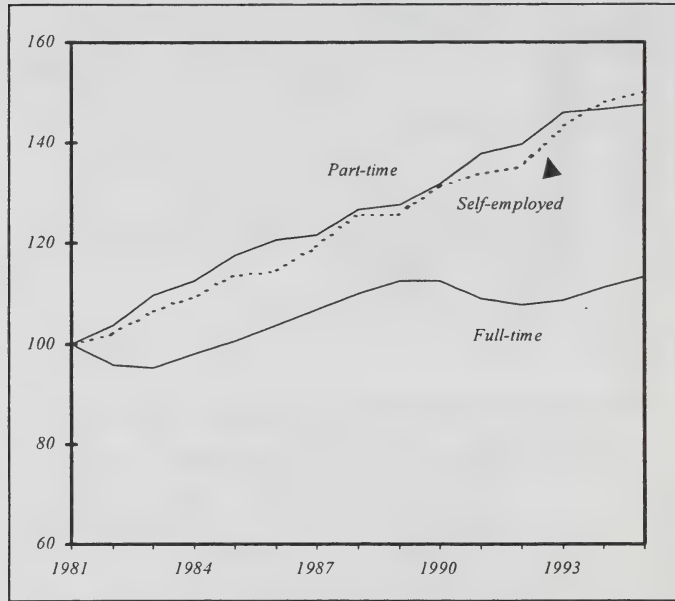
Job Creation Has Been Primarily in the Managerial and Professional Occupations. Fewer Jobs Have Been Created for Less Skilled Workers with Negative Consequences for the Less Educated



- ☐ Between 1989 (the last business cycle peak) and 1995, employment in the professional and managerial occupations has increased significantly (almost 500 thousand), while declining in clerical and primary/processing occupations.
- ☐ It is likely that technological change has had a significant impact on the clerical occupations, and manufacturing related occupations were severely hit during the recession, and have not fully recovered. Generally there appears to be a shift in employment creation towards jobs requiring higher levels of education.
- ☐ This is reflected in employment trends. Workers with low levels of education have always been at a disadvantage in the labour market, but given the shift in the demand for labour towards the higher skilled, their position is deteriorating even more. Even among the 25-44 age group, the proportion employed is falling.
- ☐ These relationships also appear in the relative unemployment rates. Among 25-44 year olds, the unemployment rate among those with less than secondary schooling was 1.5 times the average up to the early 1980s, it is now twice the average.

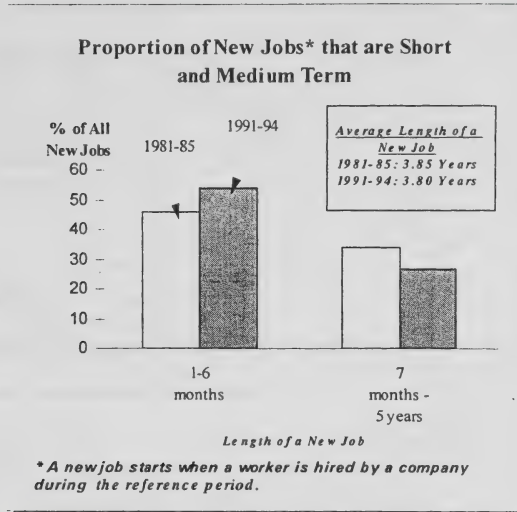
Part-Time Jobs and Self-Employment Have Grown Faster Than Full-Time Employment Through Much of the 1980s and 1990s, Providing Evidence that the Share of Canadians in "Non-Standard" Work Has Risen

**Growth in Part-Time, Full-Time and Self-Employment
Index: 1981=100**



- ☐ The proportion of Canadians in non-standard jobs (i.e. other than full-time paid employment) has been rising as the manner in which firms engage labour changes. Through the 1980s and early 1990 part-time and self-employment has been increasing faster than full-time employment. This is particularly true during and immediately following recessions. The movement towards part-time and self-employment remains during the subsequent recovery.
- ☐ Trends toward non-standard work hold implications for pension, social security, day-care and taxation policies, among others.

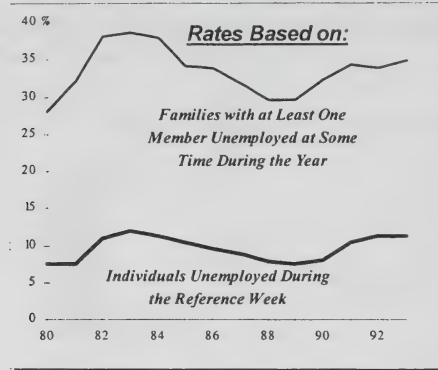
Job Instability is Increasingly of Concern to Canadians... We need to Know More About the Extent and Nature of this Issue



- ☐ The expected average length of a new job has declined only very slightly from the early 1980s to the early 1990s. However the distribution changed such that more workers were in short-term jobs, fewer in medium-term positions, and marginally move in very long term jobs.
- ☐ There are numerous other trends associated with rising job instability. As noted earlier, the proportion of people holding jobs has declined among many groups, notably the young and prime aged male workers, groups not previously affected by such trends.
- ☐ Among those employed, more are self-employed or in part-time jobs, forms of employment with higher levels of job instability. Also job instability has increased among groups previously immune to it, such as middle managers and public servants.
- ☐ These and other trends contribute to a sense of rising job instability. While the data show that the overall likelihood of being permanently laid off from a job has not been increasing, the perceived consequences of job loss may be growing more serious. To the extent that it is seen as increasingly difficult to obtain a replacement job (the hiring rate has declined), the same probability of job loss may now cause greater apprehension.
- ☐ Data on layoffs do not tell the whole story. Many job separations have been induced through "golden handshakes" and other incentives.

A Large Proportion of Canadian Families are Exposed to Unemployment, Which has been High For an Extended Period

Individual and Family Unemployment Rates



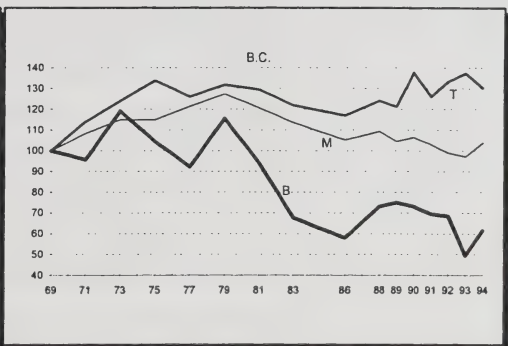
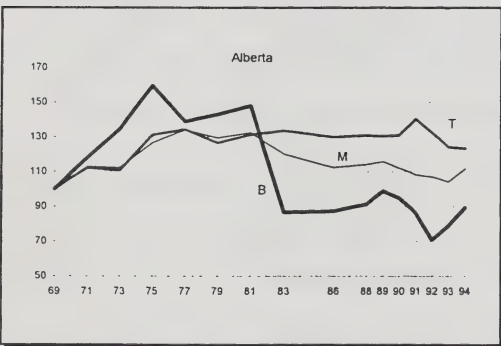
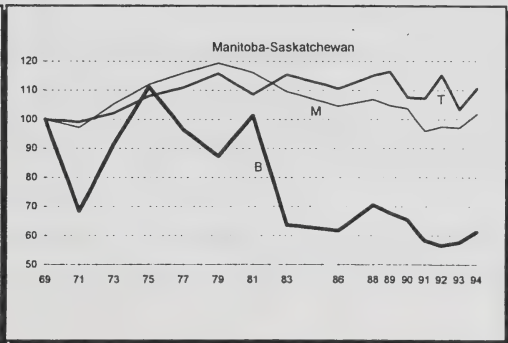
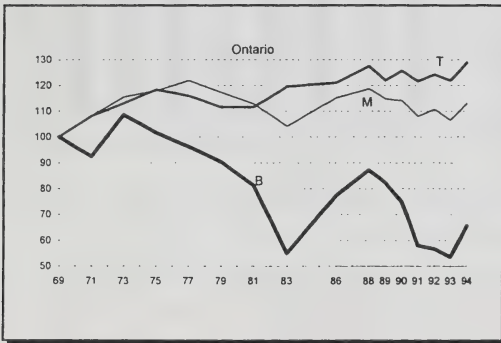
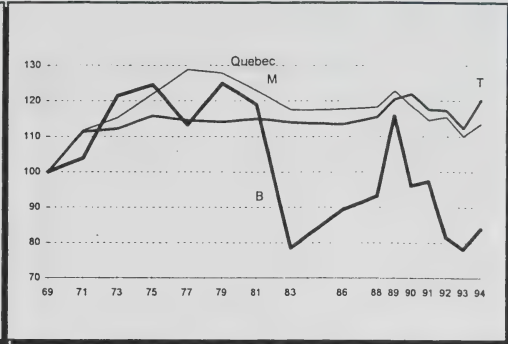
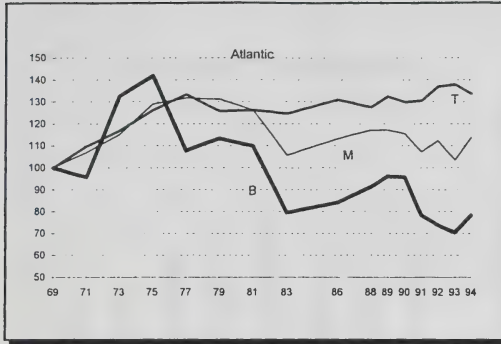
- A substantial proportion of Canadians have been exposed to unemployment, either their own or through a family member. While the average monthly unemployment rate was 11.2% in 1993, more than one third of families with someone in the labour force had at least one family member who was unemployed during the year.

After Closely Tracking the U.S. Unemployment Rate for Years, the Canadian Rate Surpassed it During the 1980s, and the Gap Increased Even Further in the 1990s



- Research suggests that the 1980s gap was not primarily related to slower job growth in Canada. Rather, for reasons not yet understood, when Canadians are not employed they are more likely than Americans to be looking for work and, therefore, to be counted as unemployed. This explanation does not apply to the 1990s when job growth in Canada was slower than in the U.S.

The Growing Inequality in Employment Earnings is Observed in All Regions

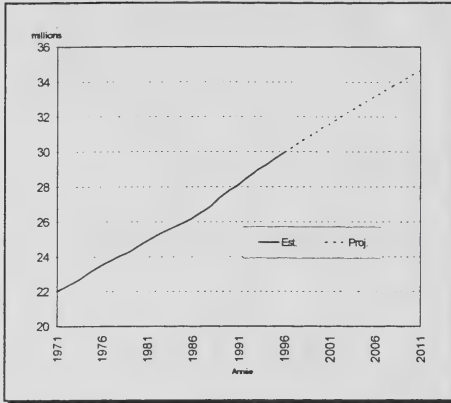


* The real employment earnings of individuals in the bottom quintile (the 20% of workers with the lowest earnings) have fallen in virtually all regions since the mid 1970s. At the same time, earnings of the highest paid (top quintile) have risen. This is the essence of the rise in earnings inequality among men in Canada, and it is observed in all regions.

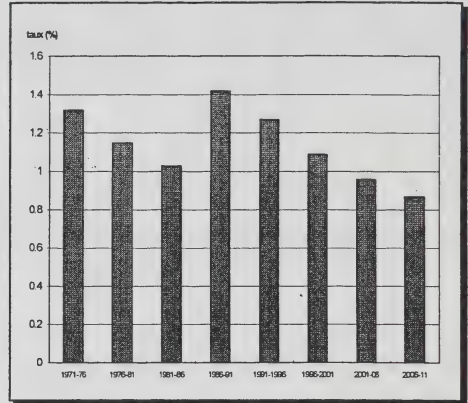
Demographic Trends

Canada has one of the highest population growth rates of all developed countries

Population of Canada



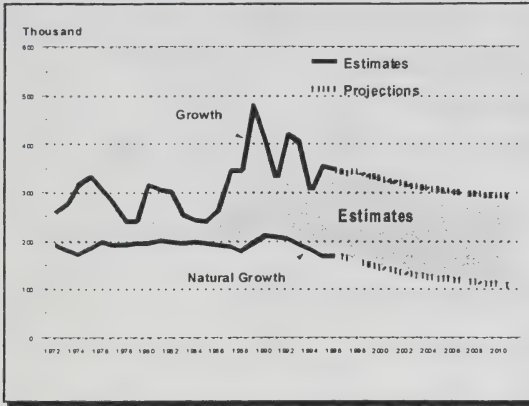
Average annual growth rate



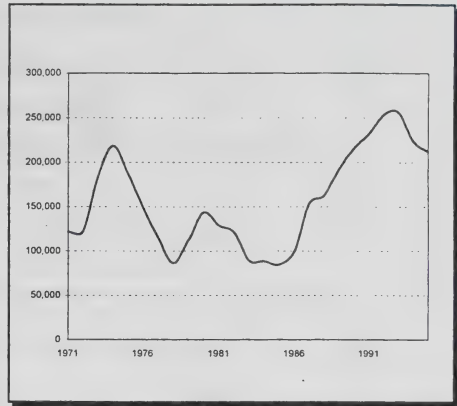
- ☐ Canada's population is expected to exceed the 30 million mark during the third quarter of 1996.
- ☐ The country's population increased from 22 million in 1971 to 28 million in 1991 and should reach approximately 35 million in 2011.
- ☐ Because of high immigration levels, Canada has one of the highest population growth rates of all developed countries. Canada's average annual growth rate for the 1970-1990 period was 1.3% compared to 0.7% in developed countries as a whole, 1.0% in the United States, 0.6% in France, 0.2% in the United Kingdom and 1.6% in Australia.
- ☐ The average annual population growth rate was 1.4% between 1986 and 1991, and will fall to about 0.9% between 2006 and 2011 due to an expected reduction in natural increase (the difference between the number of births and the number of deaths).
- ☐ By 2011, recent demographic projections suggest that the population of all provinces except Newfoundland should increase. The population share of three provinces will increase: Ontario, Alberta and British Columbia. Ontario's share will rise from 37% in 1995 to 40% in 2011, while that of Quebec will drop from 25% to 23%.

International migration will be the main growth factor

Components of population growth

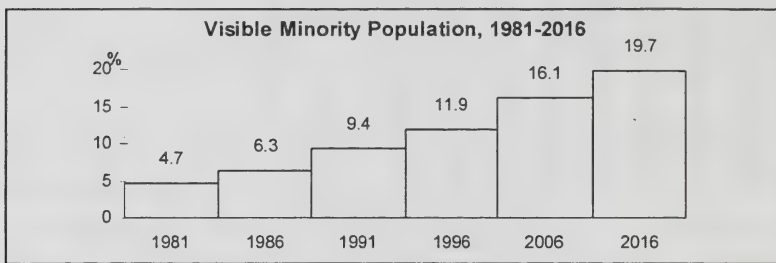
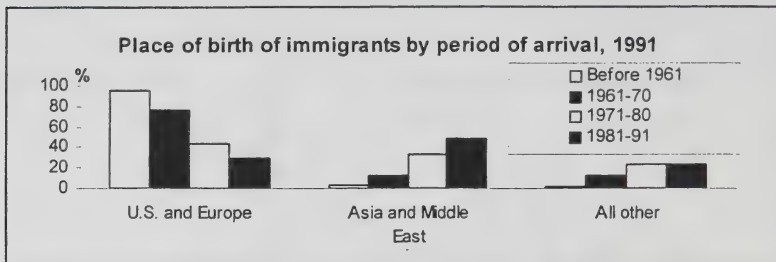


Immigration to Canada



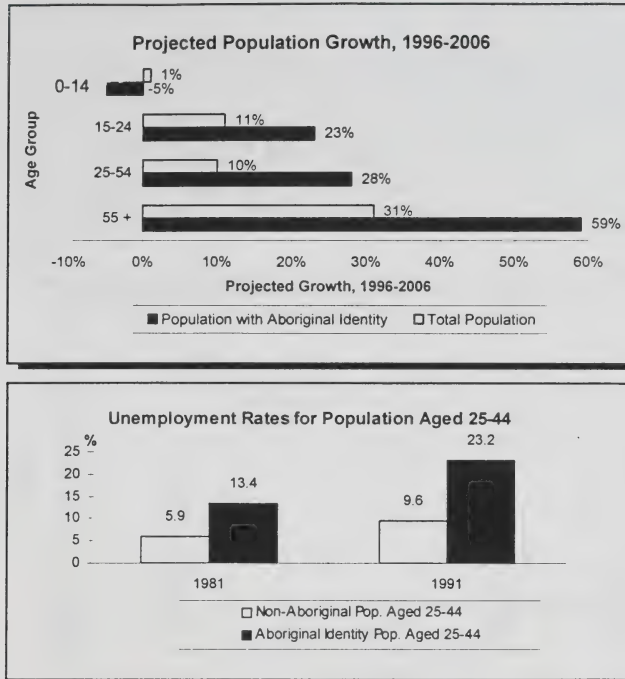
- ☐ During the 1970s and early 1980s, natural increase accounted for 60-80% of total population growth. The subsequent rise in immigration reduced the share of natural increase to 50% of total population growth between 1986 and 1995.
- ☐ Due to aging of the population, the number of deaths will increase rapidly over the coming decades, even if the mortality rate decreases at all ages and life expectancy at birth continues to increase. The result will be a reduction in natural increase.
- ☐ If international migration remains at current levels, is expected that the contribution of natural increase to population growth will account for only 40% of population growth by 2010.
- ☐ If fertility remains constant at the current level of 1.7 children per woman, the number of deaths will exceed the number of births by the beginning of the 2030s. Population growth will then depend entirely on international migration.

Visible Minorities Constitute a Rapidly Growing Proportion of the Canadian Population



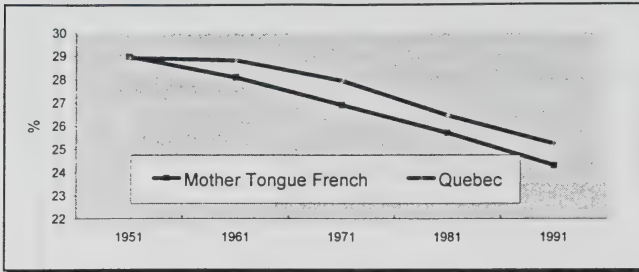
- ❑ In 1991, 95% of immigrants who had come to Canada before 1961 came from Europe or the U.S.; of those who arrived between 1981 and 1991, only 29% came from these regions.
- ❑ By contrast, immigrants from Asia and the Middle East accounted for less than 3% of those who had arrived before 1961, and nearly half of those who arrived between 1981 and 1991.
- ❑ Among immigrants arriving in 1994, 64% were Asian-born and 17% were from Europe.
- ❑ The proportion of the Canadian population that are visible minorities has increased from less than 5% in 1981, to over 9% in 1991.
- ❑ If current immigration patterns and levels continue, it is expected that visible minorities will account for one in five Canadians by 2016.
- ❑ B.C. and Ontario had the highest proportions of visible minorities in 1991, 14% and 13% respectively. Visible minorities are expected to comprise about 25% of the population in Ontario and B.C. by 2016.
- ❑ Almost one half (49.8%) of Canada's visible minority population live in either Toronto or Vancouver.

Persons with Aboriginal Identity: Much Younger and Growing Fast

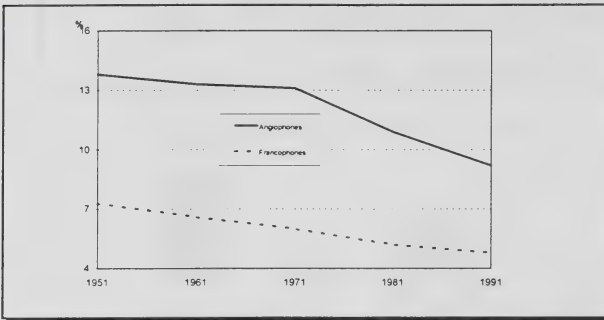


- ❑ In 1991, almost four out of ten persons with aboriginal identity (i.e. who consider themselves as aboriginal) were aged under 15. This was almost double the proportion for the total population.
- ❑ The aboriginal population aged 25 to 54, the prime labour force ages, is expected to increase nearly 30% over the next decade. This growth rate is nearly three times higher than the expected increase for the total population, and will place increased stress on the education and labour market programs targeted to the aboriginal population.
- ❑ Despite still having high school education levels far lower than the non-aboriginal population in 1991 (43% vs 62%), the percentage of aboriginal population with at least some post-secondary education is increasing. For aboriginal persons aged 25-34, the proportion with at least some post secondary increased from 35% in 1981 to 46% in 1991. However, this coincided with a comparable increase in education levels for the non-aboriginal population bringing the education deficit of aboriginals largely unchanged.
- ❑ However, unemployment rates for persons with aboriginal identity remain very high. Between 1981 and 1991, the gap between the aboriginal and non-aboriginal unemployment rates widened.

Decline in official-language minorities



Proportion of francophones and Quebec share of population

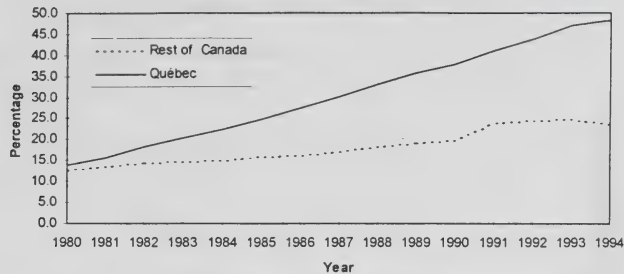


Anglophones in Quebec and francophones in the rest of Canada

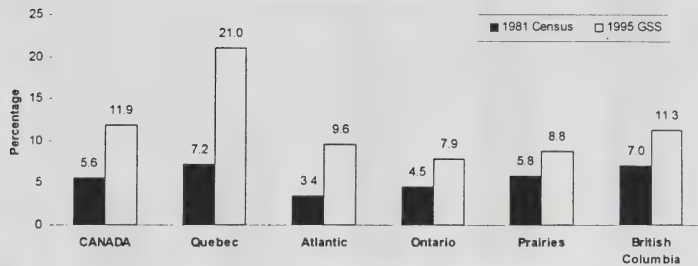
- ☐ The proportion of francophones has fallen steadily since the end of the second world war, dropping from 29% in 1951 to 24% in 1991.
- ☐ The number of francophones, on the other hand, has increased considerably, from 4.1 million in 1951 to 5.8 million in 1971 and 6.6 million in 1991. With an average annual growth rate of 0.6% in the 1971-1991 period, the francophone population grew at a rate comparable to that of developed countries as a whole. Its relative share declined, however, as a result of Canada's strong overall population growth.
- ☐ Francophones are increasingly concentrated in Quebec, with 85% living there in 1991 compared to 82% in 1951. Conversely, the proportion of Canada's anglophones living in Quebec declined rapidly, from 7% in 1951 to 4% in 1991.
- ☐ The change in Quebec's share of the Canadian population generally parallels changes in the proportion of francophones.
- ☐ The proportion of francophones in Quebec declined from 1951 (82.5%) to 1971 (80.7%), then increased during the 1970s and early 1980s. It subsequently dropped to 82.0% in 1991 following a significant increase in international immigration.
- ☐ The proportion of Quebec's population that is anglophone fell from 14% in 1951 to 9% in 1991. After increasing from 560,000 in 1951 to 800,000 in 1976, their number then decreased to 630,000 in 1991.
- ☐ The proportion of francophones living outside Quebec declined from 7% in 1951 to 5% in 1991, while the number of francophones increased from 720,000 in 1951 to 930,000 in 1971 and to 980,000 in 1991.

Families Become More Diverse and Common-law Unions Become an Alternative to Marriage and Remarriage

Percentage of Births Outside Legal Marriage



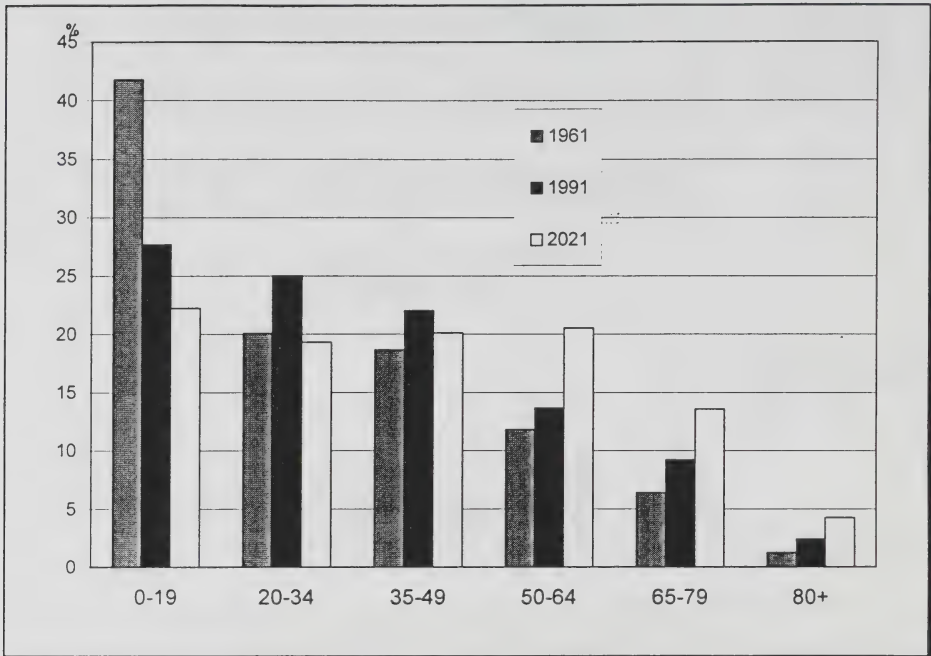
Common-law Couples as a Proportion of Total Families, Canada and Regions, 1981 Census and 1995 GSS



- ☐ Increases in divorce, remarriage and cohabitation on the one hand and decreases in mortality, fertility and marriage on the other hand have resulted in increasing diversity of family forms.
- ☐ In 1995, 45% of all families consisted of married couples with children, down from 55% in 1981.
- ☐ In recent years, there have been fewer legal marriages, and the number of divorces has stabilized to recent levels implying that approximately 30% of first marriages can be expected to end in divorce.
- ☐ The decline in the number of legal marriages has been accompanied by substantial growth in the number of common-law unions. In 1995, there were nearly 1 million couples living common-law, representing 12% of all families.
- ☐ The prevalence of common-law unions is particularly high in Quebec. In 1995, they represented 21% of all families in Quebec nearly double the level in any other province.
- ☐ The growing prevalence of common-law unions has been accompanied by an increasing proportion of children born outside legal marriage. In 1994, the percentage of children born to unmarried
- ☐ There are approximately 1 million single parent families in Canada (14% of all families). This is projected to increase to over 1.4 million by 2011.

An aging population

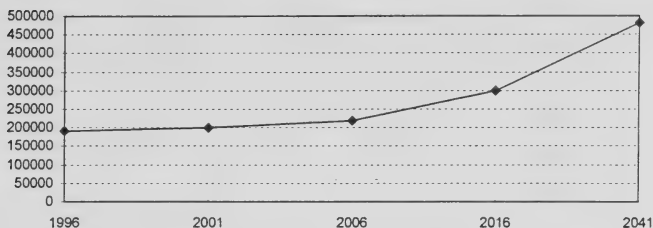
Young people, adults and seniors



- ☐ Aging of the Canadian population is due to low fertility, which reduces the proportion of young people, and to declining mortality in advanced years, which puts upward pressure on the proportion of the population 65 and over.
- ☐ The proportion of the population 65 and over rose from 8% in 1961 to 12% in 1991 and should reach 14% in 2011. This figure will reach 23% in 2031 as the 1946 to 1966 baby-boom cohorts reach and exceed age 65.
- ☐ Over the next ten years, the 65-and-over age group will grow slowly as the smaller cohorts born during the 1930s move into this age category.
- ☐ Even the elderly population is aging: while the 65-74 group will see a 30% increase in their ranks between 1995 and 2011 and the 75-84 group will grow by 40%, those aged 85 and over will actually double in number.

Life expectancy and aging related diseases impacting long-term demand for care

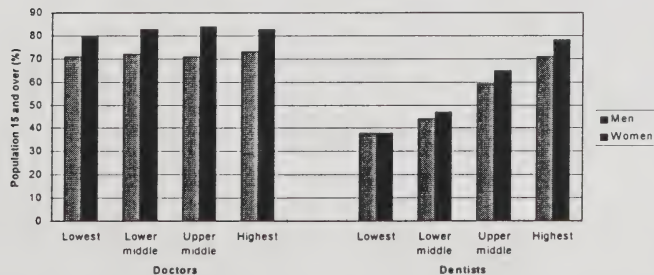
Projections for Institutionalized Population 65+ 1996-2041



- ☐ The majority of the residents of long term health care institutions, 68%, are suffering from Alzheimer's or other dementia, the effects of stroke or incontinence, chronic conditions that are difficult for caregivers to manage in the community for an extended period of time. In addition, 60% are widowed, eliminating the main social support resource in times of illness.
- ☐ Despite stability in the rates for many chronic conditions, the actual number of cases has increased steadily. This trend can be expected to continue with the aging of the population.
- ☐ The projected rate of increase in the insitutional population over the next 10 years is relatively slow. While this means that there is no immediate crisis, the rates rise rapidly thereafter.

Publicly financed physician services results in equal access for people with different incomes. This differs sharply for access to dentists.

Visited a doctor or dentist in previous year, by household income and sex, Canada, 1994

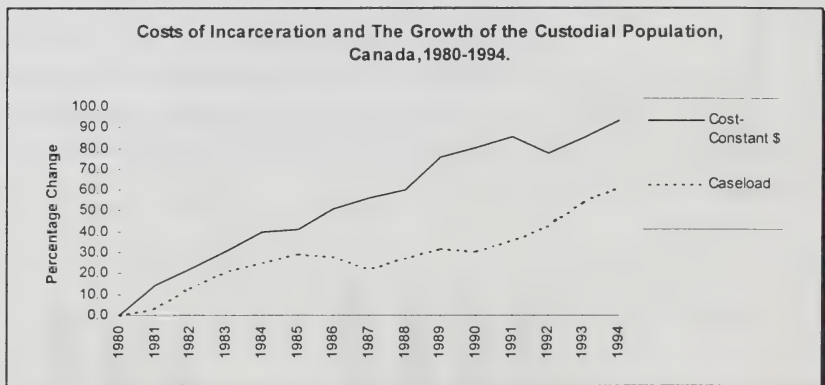


- ☐ The patterns in the proportions of the population visiting physicians and dentists, by income, provides a clear illustration of the impact of the universality on medical services.

Public Safety



- Although crime has increased significantly over many years, there has been a downward trend since 1991. In contrast, public opinion polls and the General Social Survey (1993 cycle), suggest there is a widely held perception of an increase in crime. Many believe that public concern is fueled by extensive media coverage in general, the transition in the Canadian newspaper industry to tabloid journalism, and exposure to crime reporting on U.S. television, where crime rates are much higher.



- Public concern about crime has resulted in lengthier sentences and more restrictive conditional release provisions, particularly for violent and drug offenders. As a result, prisons are currently overcrowded and projections point to further population increases. And yet, in the current fiscal environment, capacity is not being increased and corrections authorities are under pressure to reduce expenditures. Federal government reforms to sentencing and conditional release policy have focused upon reducing the use of incarceration and earlier release under community supervision for non-violent offenders.

3

Canada in an Integrated North America

The Issue

Few forces define as many economic, social, and political issues for Canada as its intense relationships with the United States. Even as Canada and Canadians increasingly pursue other international relationships, by many measures the degree of integration with the U.S. has increased in recent years, particularly in the post FTA/NAFTA era.

Economic measures alone give great clarity to the scope of Canada/U.S. integration: with over one billion dollars of trade daily, the two countries are each others' largest economic partners by far; about two-thirds of Canada's inward and outward investment flows are with the U.S.; and about one quarter of everything Canadians consumed is produced in the U.S. . Canada's consumption of American products and services, however, extends well beyond the "numbers". We are prodigious importers of Americana in many dimensions: social trends, technology, institutional arrangements, culture, legal and political influence in particular.

Stronger and more open commercial relations with the United States and Mexico offer Canada tremendous economic opportunities, provided we manage effectively the challenges arising from deeper North American integration. At the same time, the economic integration of North America implies the convergence of corporate strategies and practices in the three economies and increases pressures for harmonization of economic, social and cultural policies. The major challenge for Canada is to realize the potential

benefits from economic integration while preserving our cherished and distinctive values and identity on social, cultural and environmental fronts. It is easier to safeguard Canada's distinctiveness in several non-economic fields when domestic economic growth is relatively strong. It is a cause for strong concern that while Canada has become more economically integrated with the U.S., its economic performance over the last decade has diverged seriously on a wide range of measures: divergence of real income growth; devaluation of the Canadian dollar; declining share of North American foreign direct investment; and higher unemployment rates. For instance, per capita real GDP in Canada grew at less than half of the pace in the U.S. in the first half of the 1990. Moreover, the growth in real disposable income of Canadians substantially lagged behind the U.S. growth in the 1980s and 1990s. (see Chart 1). If the current trends of diverging economic performance were to continue, competitive and other pressures could impinge seriously on our traditional Canadian interests in fields such as social policy, culture, health, and environment.

Drawing on the issue papers submitted by several departments, and other recent analysis, this paper seeks to provide scope to the question of North American integration; sets out several "challenges" Canada will face over the next several years, and suggests a large number of topics that would benefit from a multi-disciplinary, multi-departmental research program to support future policy formulation.

State of Knowledge

Global Context: Economic Integration

The world economy is increasingly shaped by three inter-related trends: globalization of production and innovation activities; the information revolution; and the increasing importance of knowledge-based growth. Transnational corporations (TNCs), through their trade, investment and innovation activities, are playing a key role in the global integration process. Over 60 percent of their trade is conducted on an intra-firm or intra-company basis. Outward foreign direct investment (FDI) stock and global sales of foreign affiliates of TNCs — two indicators commonly used as a proxy for international production — currently exceed U.S. \$2.6 trillion and U.S. \$5.2 trillion, respectively (UNCTAD, 1995). In the 1980s and the 1990s, FDI stock grew at a significantly faster pace than world GDP and exports (Chart 2).

As integration of the global economy deepens, individual firms and nations face major opportunities and challenges. The opportunities for growth and prosperity are magnified for smaller economies like Canada. They will be given access to markets much larger than their own domestic market. At the same time, however, competition for markets, physical and human capital, technology and innovation activities will be increasingly fierce. Consequently, to realize the potential benefits of economic integration, firms and nations need to be highly competitive and manage well the challenges of intense international competition and the pressures for structural adjustment.

Canada has been and continues to be an active participant in the globalization process. Our outward orientation, as measured by two-way trade and investment flows, has risen dramatically (Chart 3). Exports of goods and services now account for close to 42 percent of Canada's real GDP. We also spend a similar proportion of our real GDP on imports from other countries. In addition, Canada exports as well as imports large amounts of capital. For instance, in 1995, the inward and outward FDI stocks accounted for 21.5 and 18.2 percent of Canadian GDP, respectively, a significant increase from the 1985 levels.

North Economic Integration: Trade and Investment

Although Canada's commercial relations with Mexico and countries in Asia, Europe and South America have strengthened in absolute terms, the U.S. is our largest trade partner by a vast margin. Not only is three-quarters of Canada's international trade with the United States, the ratio has increased in the past 5 years (see Chart 4). Over one quarter of everything produced in Canada is sold to the U.S., and 25 percent of everything that is consumed in Canada is bought from the U.S. Net exports to the United States have been the engine of growth and job creation in Canada in the past five years.

Investment linkages are similarly dominant. Close to two-thirds of the stock of FDI in Canada is U.S.-based. Similarly, about 55 percent of Canadian outward FDI stock is in the U.S. Since FDI acts as a powerful complement to trade and technology flows, these investment patterns further drive integration [see McFetridge (1991) and Industry Canada (1996)]. Canada's growing trade and investment linkages with Europe and Asia will provide more balance over time, but relationships with the U.S. will continue to dominate (Chart 5).

In the context of North American integration, trade and investment are becoming increasingly linked since a relatively high proportion of Canada's trade with the United States is on an intra-firm basis. Approximately 70 percent of trade by U.S.-controlled firms in Canada is intra-firm; almost one-half of our merchandise trade with the U.S. is on this basis, largely between Canadian subsidiaries of U.S. multinationals and their parent companies (see Chart 6). Moreover, the top 50 exporting firms in Canada — many of which are large U.S.-owned companies — account for almost 50 percent of Canadian merchandise exports. In short, as these figures indicate, North American economic integration is in large measure driven by intra-firm trade, in which trade and investment of U.S.-based firms in Canada play a highly complementary role. Thus, having competitive framework and investment policies that tend to attract and retain trade-inducing FDI is critical for future trade expansion, economic growth and employment opportunities in Canada.

Research indicates that the principal factors driving the increased trade linkages between Canada and the United States and the recent Canadian export boom have been the regional free trade agreements (FTA and NAFTA), a general trend toward increased outward orientation, an improved cost

position and a relatively stronger U.S. domestic demand. The improvement in cost position in the first half of the 1990s vis-à-vis the United States, however, was entirely due to the depreciation of the Canadian dollar (Chart 7). It is important to note that Canada has lost considerable ground to the United States in terms of manufacturing productivity, the fundamental determinant of underlying competitive position (Charts 7 and 8). The productivity challenge is very important to Canada's fortunes, economic and otherwise, and is discussed below in some detail.

North American Integration: Non-Economic Perspectives

While they are less easy to define and measure than trade flows, other aspects and forms of North American integration are just as central to the policy agenda as economic forces. They raise, relative to purely commercial forces, issues and choices that are less clear-cut, often more controversial, and less guided by conventional research and analysis. As departments have indicated, there are few public policy domains *not* directly affected, to some degree or another, by North American integration. Consider, for example:

- ☐ Canada benefits from relatively easy access to U.S. technology developments; this creates new choice and opportunity for Canadians, but risks undermining distinctively Canadian approaches, e.g. in the broadcasting sphere.
- ☐ Canada has staked out its own territory in the cultural field, encompassing ownership, production, and distribution. This carries a cost, however, in other domains (e.g., in trade negotiations). At the same time, it is also our policy to encourage the export of goods and services produced by the same cultural industries these policies strive to protect.
- ☐ NAFTA greatly facilitates the flow of professionals between the two countries; is there symmetry or balance in the flows of the entrepreneurial, highly-educated personnel that will create the next generation of important services, technologies and products?
- ☐ Canada's health care system is distinctive, and can be a source of competitive as well as social advantage. Yet elements of the American approach have been influential in shaping the policy discussions on health care in some Canadian provinces, especially in Ontario and Alberta.

Opportunities and Challenges

Whether in the trade and investment, or other domains, continental integration is of direct consequence to a multiplicity of Canadian interests. Many reflect a similar tension. On the one hand, there are the obvious opportunities and benefits that North American integration offers, by creating conditions such as market access, efficiencies, and individual choice on a scale unavailable domestically, or historically. On the other hand, tighter integration and the strong gravitational pull of the U.S. constrain our *ability*

to realistically pursue distinctively Canadian approaches. To a considerable degree, the overarching challenge is to capture the economic and other benefits of integration, to provide the base for Canadian approaches in other domains such as social programs, culture, and the environment.

From an economic perspective, the increased integration between Canada and the United States is critical because it offers greater scope to improve productivity — the foundation of competitiveness and improvements in living standards — in many important respects: through more efficient utilization and allocation of productive resources, greater diffusion of best practice technologies (product and process), new management practices, exploiting economies of scale and scope, increased innovation, increased investments in physical and human capital, efficient sourcing of inputs, and broadening of the export base. [See Economic Council of Canada (1988), Harris and Cox (1984), McFetridge (1991), Eden (1994) and Globerman (1994)].

In principle, increased competition arising from the integration of economic activity should improve resource allocation and improve flexibility and adaptability by inducing rationalization and stimulating product specialization in Canada, in the process reallocating resources away from inefficient plants, firms and industries. Increased economic integration would allow business to reduce costs through access to more competitive inputs, facilitated through tariff elimination and other NAFTA measures. The increased dynamism and flexibility in turn should better position Canadian-based firms to take advantage of market opportunities in North America, and in high growth markets elsewhere. For consumers, a higher level of foreign and domestic competition leads to lower prices, and a wider choice of products with greater quality and improved service.

The evidence from recent research undertaken on behalf of Industry Canada, Statistics Canada and others suggests that the economic benefits of increased integration could be substantial. For instance, the performance of outward oriented Canadian firms has been found to be considerably superior to that of domestically oriented firms in terms of sales and asset growth, productivity, R&D spending and profitability. A recent study by Wharton Economic Forecasting Associates (WEFA) for Industry Canada and DFAIT suggests that the economic benefits to Canada from inward FDI, via its impact on capital formation, productivity and trade expansion, are quite considerable: a \$1 billion increase in inward FDI is estimated to raise Canada's GDP by about \$4.5 billion over the medium to long-term.

Therefore, the major goal for Canada is to capitalize on economic opportunities as well as safeguard Canadian interests on social, cultural and environmental fronts. To accomplish this formidable task, Canada needs to address effectively a number of challenges.

Capitalizing on Opportunity

Challenge 1:

Strengthen Relative Productivity Performance

A nation's productivity performance relative to its commercial partners determines its underlying overall competitive position. Without improvements in relative productivity, improvements in cost competitiveness have to come either from currency depreciation or from slower growth in labour compensation. Either way, this "improvement" is achieved at the expense of slower growth in living standards. This is precisely what has been happening in Canada over the last decade. Therefore, the challenge is to improve Canada's relative productivity performance and become a highly competitive location for investment, innovation and trade activities.

Canada, like other industrialized countries, experienced a dramatic slowdown in productivity growth in the post-1973 period. More importantly, according to OECD, Canada's productivity performance has been the worst among the G-7 countries. Consequently, Canada has lost considerable ground to other OECD countries in terms of living standards (for a detailed discussion of Canada's productivity problems and consequences, see the companion document "The Key to Economic Growth: Improving Productivity").

Especially worrisome in the context of North American integration is the widening gap between Canada and the U.S. in terms of productivity. OECD estimates show that commercial sector total factor productivity (TFP) — the efficiency with which capital and labour are used in the production process — *declined* by 0.1 percent on average per year during the 1979-95 period, compared to an average annual *growth* of 0.5 percent in the United States. It is important to note, however, that Statistics Canada's estimates suggest that the aggregate TOP grew at a similar pace in the two countries during this period. But, there is no question that other G7 countries have gained a considerable ground over Canada and the United States in terms of overall productivity during the past 20 years.

The productivity problem is more dramatic in manufacturing, which is front and centre in international trade and subject to increasingly intense international competition. After converging to U.S. productivity levels for nearly 25 years in the post-war period, Canadian productivity performance lagged behind the U.S. since 1985. In the last ten years, the total factor productivity performance of *all* Canadian manufacturing industries (two-digit SIC) has lagged considerably behind that of their American counterparts (Chart 9). By 1995, the U.S. manufacturing labour productivity level advantage over Canada was almost 50 percent, compared to a productivity gap of 23 percent in 1985 (Chart 10).

It is interesting to note that the U.S.- Canada FTA was expected to close significantly the large manufacturing productivity level gap, largely due to scale economies, and raise Canada's real GDP by about 2.5 percent over a ten year period. So what could explain the divergence of the productivity gap? The reasons for Canada's relatively poor productivity performance have been

researched. But, the research findings are not conclusive about the causes of the productivity problem. Nevertheless, research to date points to a number of possible factors: slower and weaker adjustment in Canada to structural changes and supply and demand shocks; slower growth in R&D spending; lower rates of capacity utilization; and a smaller shift to knowledge-based industries. The causes of poor productivity performance are discussed in some detail in the paper on economic growth.

Challenge 2:

Attract and retain quality investments in physical capital and R&D.

Investments in physical capital and R&D are becoming increasingly footloose across countries. Significant advances in process technologies, the communication and information revolution, and fierce global competition among nations for technology and foreign direct investment are the important factors contributing to the internationalization of production and innovation activities [see Industry Canada research volumes: Eden (1994), Globerman (1994), and McFetridge (1991)].

The FTA/NAFTA, the close proximity of the member countries, and the prominence of transnational corporations tend to make investment and innovation activities within North America all the more footloose. In this context, Canada faces a particular challenge of building a highly competitive location for investment, innovation and attracting and retaining highly educated, knowledge workers versus the United States — the most dynamic economy in the world and a dominant trading partner of many industrialized and emerging economies.

What are the important locational determinants of investment? The evidence from micro-economic research suggests that locational decisions by multinationals are influenced by a host of country-specific factors such as the availability/proximity of natural resources and raw materials, productivity, availability of skilled-labour, market size, proximity and access to large and growing markets, investment incentives, tax structure, well developed physical (including transportation) and technological infrastructure, lower input prices (labour and capital costs), flexible and dynamic factor and product markets, currency stability, competitive government incentives, and efficient market framework policies, including regulation and standards [see Industry Canada research volumes: Eden (1994), Globerman (1994), and Waverman (1991)].

Research also shows that the location of R&D activities depends on the quality of the technological infrastructure, the availability of highly skilled professionals (scientists, engineers and technicians), the tax structure (e.g., R&D incentives), the structure and dynamism of internal markets and regulatory and framework policies [see Industry Canada research volumes: Eden (1994), Globerman (1994), and McFetridge (1991)].

Since both Canada and the United States have much more mature and developed economies than Mexico, it is primarily against the United States that Canada will be competing to attract high quality productive resources and innovation activities. Therefore, Canada needs to be competitive against the United States in as many locational determinants as possible.

Relative to the U.S., Canada offers both domestic and foreign firms several advantages. It is rich in natural resources and raw materials. It has a superior transportation and physical infrastructure (see Global Competitiveness Report, 1996). It has the best quality of life according to the UN Human Development Index, offering a high-quality, low cost education and health care system, and clean, safe cosmopolitan cities. In terms of business costs, Canada's legal environment and practices are less litigious than those in the United States. In general, the corporate tax burden in the two countries is quite similar — although the top corporate tax rate is significantly higher in Canada than in the United States. Canada also offers generous R&D tax credits — perhaps the most generous in the world (Conference Board of Canada). Furthermore, under current Canadian policies, businesses enjoy a significant health care cost advantage.

The U.S., however, has a decisive advantage in several key areas. It has about ten times the domestic market, with more flexible and dynamic factor and product markets. It has a relatively more sophisticated technological infrastructure, and a substantial advantage over Canada in terms of extensive research clusters. Investors face a cost of capital in the United States that is, on average, about 2 percentage points lower than in Canada [see Industry Canada (1996): forthcoming Capital Markets volume], and the U.S. currency is more stable. Furthermore, many state governments offer very generous tax and investment incentives to business for purposes of attracting investment and innovation activities [see Industry Canada (1996): forthcoming Asia Pacific volume]. It is interesting to note that Canada's share of global inward FDI stock in North America declined by 6 percentage points between 1980 and 1994 (see Chart 9), while that of the United States increased by 5 percentage points.

Other locational determinants

Industrial clusters:

Throughout North America, an important economic phenomenon is the emergence of a few dozen industrial clusters, in which similar and related businesses capture agglomeration economies in a relatively small geographic space. When they reach a critical mass, these clusters achieve such scope that they feed on themselves. Examples in Canada might include the telecom services industry spawned in New Brunswick, pharmaceutical industry in Montreal, the telecom/software cluster in the Kanata region, the automotive industry in southwest Ontario, and petrochemicals in Alberta. Perhaps no such clusters are more famous, robust, and reinforcing than prime American examples such as Silicon Valley and Research Triangle Park.

Research by Porter (1991, 1992) highlighted the importance of clusters, which group not only competitor firms, but also their related and supporting infrastructure (e.g. research parks), suppliers (especially important in a just-in-time environment), and often, key customers. Firms share access to, among other features, a pool of talent attracted by diverse opportunities.

The 'clustering' phenomenon suggests several potential consequences for government policy. The emergence of several such clusters in the U.S. reduces the attractiveness of Canadian locations, if the latter cannot offer comparable agglomeration economies. A related phenomenon is trans-border clustering in some sectors/regions; for example, the Cascadia region contains a pool of software and related industries that operates effectively across boundaries. To the extent such clusters are becoming a requisite to new growth, especially in advanced technology industries, then policies and actions should foster and reinforce their development, e.g. through the location of research facilities, support for centres of excellence, or the allocation of training and mobility support. Whether, when, and how to support industrial clusters overtly through government action deserves much more analysis.

Regulatory burden and labour market policies:

The regulatory environment imposes costs and administrative burdens and is, therefore, an important determinant of the business climate. With the ongoing globalization of the world economy and the reduction/elimination of formal trade barriers, technical barriers created by differing regulatory requirements take on increasing importance. As we become more integrated with the U.S., the efficiency of our regulatory framework to support continental operations will take on greater importance in corporate decision-making, increasing pressure to harmonize with the U.S. Standards systems and mutual recognition agreements must address this pressure. In some cases both regulatory efficiency gains and international harmonization objectives will be achieved by the single act of using international standards for regulatory purposes.

Labour laws and policies in Canada tend to impose a higher regulatory cost on employers and reduce the flexibility and dynamism of labour markets in Canada relative to those in the United States: minimum wages tend to be higher, hours of work and overtime regulations tend to be more restrictive, advance notice and severance rules tend to be more stringent, and domestic labour laws are more conducive to the formation and retention of unions (Gunderson and Riddell, 1994). North American integration would increase pressures for the harmonization of domestic labour regulations and programs with those of the United States and Mexico. The challenge for Canada is to ensure that our labour laws and standards are not unduly compromised such that harmonization would not lead to the "lowest common denominator".

Market framework policies:

Canadian firms trading in North America seek greater harmony in terms of marketplace rules, such as policies and programs with regard to competition, intellectual property protection, investment, innovation, product standards, regulation, telecommunications and trade. Greater cooperation and coordination among Canadian, American and Mexican policy makers and enforcement officials with regard to the convergence of market framework laws and programs, and enforcement practices, would ease conflicts and facilitate the integration process. However, whether in the North American or a more global context, smaller economies have less impact on outcomes. Because of this asymmetry, Canada needs to take a more proactive role in regional and international fora to ensure that the harmonization of domestic market framework policies will not unduly lower or raise domestic standards and regulatory burden, and adversely impact on the interests of Canadian consumers and producers [see Anderson and Khosla (1995), Hirshorn (1996), the forthcoming Industry Canada research volume on Competition Policy, Intellectual Property Protection and International Economic Integration, and Rao (1993)].

Trade protection:

Access to international markets is another important locational determinant. Trade protectionism (both actual and potential) is often an important intangible factor influencing the decisions by both Canadian and foreign companies to locate and expand investment and innovation facilities in the United States. Discriminatory procurement preferences may exclude otherwise competitive Canadian producers from selling to U.S. federal and state governments in major areas such as telecommunications and urban transit equipment. Similarly, protectionist U.S. trade remedy actions might create uncertainty about the access to the American market from Canada and discourage investments here, that might be subject to border measures and trade disputes.

Challenge 3:**Retain and attract highly qualified people**

The global economy is becoming increasingly knowledge-based. Consequently, the competitiveness of firms and nations is being shaped more by the stock of new knowledge and ideas and less by natural endowments. Moreover, a nation's ability to attract and retain quality investments and innovation activities critically depends on its ability to develop, attract and retain highly educated and skilled professionals and technicians.

As a result, there is intense competition among nations to retain and attract knowledge workers. They are potentially highly mobile across countries. This is especially so within North America, a trend reinforced by NAFTA provisions. Their migration decisions are primarily influenced by a number of key factors: the probability of finding a job related to their profession, wages and salaries, personal taxes, fiscal benefits, cost of living, quality of life, and infrastructure. Of course, immigration policies of host countries would determine the actual outcome.

Canada stacks up well against the United States in the development of human capital. However, Canada's ability to attract and retain knowledge workers is seriously undermined by its personal income tax structure. Canadian wage earners, on average, pay a significantly larger proportion of their earnings towards taxes than their counterparts in the United States. More importantly, the top marginal personal income tax rate is, on average, substantially higher (up to 20 percentage points?) in Canada than in the United States. In addition, sales taxes are also considerably higher in Canada.

Indeed, according to a recent Price Waterhouse report, Canadians face far higher taxes, and in general, a higher cost of living than their American counterparts. The tax burden is substantially higher for those of upper income. For instance, a married taxpayer working in Toronto with a salary of \$100,000 could add over \$20,000 to after-tax income (an increase of close to 40 percent) if he or she were to earn the same income in New York or Chicago. The counter-argument that Canada offers a better quality of life will lose of its potency over time if the competitiveness trend is not reversed and other important attributes, e.g. social programs, have been reduced in impact.

These pressures are especially pronounced in the case of "knowledge workers", e.g., software engineers. Highly educated, they have little trouble with visas and green cards; often young, they are mobile and unattached to particular employers or communities; through communications technologies, they work at home or in attractive research campuses, not shop floors and office towers in city cores. There is a continental shortage of such workers (cf. employment listings in major newspapers), placing a growing demand to train and retain such assets in Canada. There are, by one estimate, some 300 thousand Canadians in California's "Silicon Valley".

Challenge 4:

Address Structural Change in Labour Markets

North American integration is also having a profound impact on the Canadian labour market in terms of wages and employment, workplace practices and government laws, policies and programmes. Further restructuring as economic integration accelerates will lead to both job destruction through increased imports to Canada, and job expansion through increased exports. The predictable consequence is that import competition will put most pressure on low-wage jobs, since the comparative advantage of Mexico and some parts of the U.S. is in low-wage labour. The export expansion will occur in higher-wage jobs that embody significant human capital and high-value added products. These areas of business are relatively more immune to competition from Mexico, but not the U.S. Competition from both, however, will intensify for market niches and world product mandates in such products and services.

The attendant restructuring will increase demand for government programs and policies to deal with the adjustment consequences, and to provide infrastructure to facilitate the change to high value-added production. The key policy issue will be how best to provide opportunities for displaced workers for upgrading their skills so that they can be employed elsewhere in the economy. Therefore, the challenge is to focus on labour market policies that support market forces and structural adjustment in the economy (Gunderson and Riddell, 1994).

Challenge 5:

Facilitate greater internal economic integration

Canadian provinces trade a great deal with each other. In fact, five largest provinces rely just as much on domestic trade as on international trade. The typical Canadian province trades 22 times more with other provinces than with U.S. states of similar size and at similar distance [see Helliwell (1996), and McCallum (1996)]. Nonetheless, significant impediments to freer internal mobility of goods and services, capital and labour still remain within Canada.

Dismantling internal trade barriers must proceed hand-in-hand with the NAFTA process, for three essential reasons. First, impediments in the domestic market are inhibitors to developing industries of competitive scale. Second, investments will be lost to the U.S. if, from that vantage, firms would actually have better access to the full Canadian market. Third, a more integrated North American market makes it increasingly difficult, both politically and economically, to sustain micro-economic policies at a sub-regional level that are incompatible with the American situation. For example, in the electricity sector, Canadian governments are struggling to cope with new pressures created by U.S. deregulation of that market.

In short, if the potential benefits from integration are to be fully realized, internal economic integration should go hand in hand with North American economic integration. Therefore, continued efforts are required to reduce remaining barriers and impediments to internal trade, investment and labour mobility to ensure the benefits of a single national market are achieved.

Challenge 6:

Seize opportunities in overseas economies

Our efforts to strengthen North American economic integration should not occur at the expense of opportunities for Canadian business in other markets, especially the emerging and dynamic markets in the Asia Pacific and South America. In addition to providing economic benefits, diversification would provide new balance in our portfolio of international interests. The recent strengthening of our investment linkages with Europe and Asia Pacific would improve our future commercial relations with these countries, because FDI is the driver of trade and technology flows.

The forthcoming Industry Canada research volume on Asia Pacific strongly suggests that the Asia Pacific region offers tremendous trade and investment opportunities. Canada's commercial linkages with these economies have

strengthened considerably, but from a very small base. However, our penetration of the Asian market has not proceeded as fast as that of other countries and consequently Canada has been losing market share in this region to other countries. Removal of impediments to SME participation in North American and overseas markets would be helpful in seizing the opportunities in foreign markets. Recent research suggests that lack of sufficient information concerning opportunities and challenges abroad and formal and informal barriers to trade, investment and technology flows are partly responsible for the low international participation of SMEs.

Canadian firms have been investing a great deal abroad. Research done for Industry Canada indicate that direct investment abroad provides considerable economic benefits to Canadian firms, improves the performance of the Canadian economy and expands and broadens Canada's trade. The challenge is to facilitate further expansion of Canadian investment abroad while ensuring that the domestic innovation activities of Canadian-based firms are retained and expanded.

There is an interesting cultural policy dimension to this question. As Canada expands its commercial relations with other countries, e.g. in Asia, there are related impacts in areas such as immigration, citizenship, customs arrangements, and tourism, for example. The changes to the cultural mosaic in Western Canada in the past decade are an important, vibrant, and non-American influence. By some estimates, Canada's cultural composition will be one quarter non-Caucasian early next century. This growing cultural diversity could be an important asset for strengthening Canada's commercial relations with emerging overseas economies.

Maintaining Canadian Autonomy

The accelerating pace of North American integration and the related need to become more competitive than the U.S. has profound implications across the spectrum of socio-political, cultural, environmental and labour issues. With accelerating North American interdependence, the degree of domestic policy independence is narrowing. There remain few purely "domestic" issues that are immune to offshore pressures. Competition for international investment — encouraged by the activities and mobility of MNEs — means that many traditionally domestic policies such as education and training, taxation, social protection, culture, or labour legislation, have become international by force of circumstance, if not design. Trends originating globally, but especially in the U.S., echo in Canada. Canadians have identified the preservation of Canadian policy autonomy as a top priority in Canada-U.S. relations. These challenges are every bit as formidable as the more measurable economic factors described above.

Challenge 7:**Maintain a distinctive culture**

A most fundamental challenge for Canada is to resist forces of cultural homogenization, and to find new ways of maintaining and nurturing a distinct Canadian identity in an evolving "North American" market. Ease of access to the U.S. market under NAFTA and the information revolution can work both ways. Clearly, these forces have a strong "Americanizing" influence. Conversely, however, they provide potentially significant market opportunities for Canadian cultural expression and productions, particularly for new media. Canada has a superb communications infrastructure and associated expertise, especially in niche areas like computer graphics, animation, and multimedia (see Department of Canadian Heritage paper on Canada's Future Development: Social and Cultural Impacts of Globalization and Information Technology). We have had success in generating international markets for Canadian products in the television, film and video, sound recording and publishing industries. NAFTA clears the way for Canadian cultural industries and artists to break into the U.S. market faster, and Americans are increasingly tapping into our cultural resources and expertise for their own productions.

Nevertheless, the policy pressure will remain to define and protect that which is unique and valued in terms of Canadian identity. Conventional mechanisms will, increasingly, come under fire in trade and investment negotiations, e.g. the Multilateral Agreement on Investment and emerging work in the WTO. Congressional pressure from the U.S. also plays a part. New "made in Canada" alternatives will need to be defined, perhaps by concentrating on supply side development (more and better Canadian products and services), and less on market protection through ownership and content restrictions. One set of pressures that will without doubt intensify is trans-border electronic trade in information products and services.

Challenge 8:**Evolve an affordable social safety net**

Canada has invested more than a century building a social infrastructure which today is considered among the best in the world. The system of social support includes universal Medicare and more generous safety nets and job support than those available in the U.S. Canada is also widely deemed to be more beneficent with welfare. The relatively lower cost of the Canadian medicare system in particular, and features of the unemployment insurance system, have historically been a locational competitive advantage for Canada.

Further North American integration suggests a wide range of social policy implications. The basic affordability of the system, and the benefits payout regimes, have direct consequence on competitiveness, especially since many programs are financed with payroll taxes. By raising the cost of labour as a productive input, such programs can either drive jobs south, or encourage further substitution of machinery and technology for labour. Generous benefits schemes also lower the opportunity cost of not working, reducing

the supply of labour. Related to this, if Canada cannot meet the economic challenges discussed above, it will not generate the “premium” necessary to afford the programs and services most cherished by Canadians. This will generate further pressures to change, as the current debate on “two tier” systems is demonstrating.

The policy dilemma is the desire to provide Canadians a sound social safety net (or at least, trampoline), of a distinctly Canadian character, in the face of the need to compete within North America. The nature of this debate will become intense over the medium term, for several reasons: the aging population with health and pension costs; the need for employers to continuously reduce costs; the growing proportion of the labour force that has no continuous employer (which is the basis for collecting payroll taxes and allocating many benefits); and proposals for realignment of federal and provincial powers in the social field. The debate is also being fuelled as some provinces look to elements of the American approach, e.g. workfare, two-tier systems. Changes in the social policy domain would have international competitive consequences that would be more profound than ever, and should be examined in a comprehensive manner.

Challenge 9:

Protect our environment

As with trade, investment, and labour market issues, environmental issues will increasingly become North American or global in character, rather than national or local. Partly, this will drive further harmonization in the environmental sphere, e.g., emission control standards in the automotive area. Producers with operations across the continent will exert pressure to lower regulatory burden, and for environmental regulatory harmonization. More problematic, in a competitive sense, are situations where environmental regulations significantly diverge. Pollution-intensive industries have an obvious incentive to migrate to jurisdictions where the standards and costs of compliance impose relatively low burdens.

Pollution abatement and avoidance is clearly a direct expense, though not without payback to the firm, and certainly to society. There are many questions that need to be addressed, including: relative costs of compliance in relation to the U.S. and Mexico; efficiency and timeliness of the regulatory administrative system; economic instruments for pollution control (e.g. creating markets for pollution rights); transborder trade in hazardous wastes; and the use of environmental regulations as a non-tariff barrier, e.g. through the imposition of phytosanitary standards; and legal liability systems.

The interrelationships between environmental and economic objects require much better analysis, both scientific and economic, to form the basis for appropriate regulation. This is especially important to Canada, which derives large export revenues from resource-based industries.

Challenge 10:**Maintain an independent international role**

Most Canadians support Canada's conventional role as an intermediate power, active in most key international fora. Canada is, in fact, the only country in the world with membership in all of the UN, WTO, ILO, WHO, G7, OECD, QUAD, NAFTA, APEC and FTAA; and the Commonwealth and la Francophonie. Its foreign policy traditions are more internationalist than most, exemplified by its role in the UN.

The process of North American integration, buttressed by NAFTA, exerts pressure on Canada's *de facto* sovereignty in many fields. Canada's strong commitment to multilateralism is an essential counterbalance. As international arrangements broaden in scope (e.g. the so-called "trade and . . ." issues), Canada must have clearly defined its strategic objectives if it is to be a policy "maker", not "taker". This requires a cross-cutting assessment of strategic priorities, trade-offs, fora, and timing to be advanced in negotiations and diplomatically. For example, it can be argued that the possible challenge by Canada regarding the extraterritorial reach of the U.S. Helms-Burton law is an example of how the rules-based dispute settlement mechanism under NAFTA could enhance Canadian sovereignty.

Clearly, the trade policies of the United States and Canada have been moving in the same general direction of significant trade liberalization. Another common feature is that they remain protectionist of the same sectors - agriculture and textiles, clothing and footwear (TCF). The global system has put considerable pressure on these policies through agriculture tariffication and end of the Multifibre Arrangement (MFA).

In TCF, in particular, Canada has only been able to maintain its very high tariffs because the U.S. is also doing so. During the next five to ten years there will be considerable pressure on the developed countries to do more for the LDCs to bring them further into the WTO. These are the sectors of their greatest comparative advantage. At the same time, the U.S. is pressing to have labour standards and other issues of great concern to the LDCs included in the WTO. It is very possible that over this period the TCF sectors will lose their considerable protection. This could have considerable regional economic impact in Canada.

The prospective global trading environment post 2000 is another factor. The next round of multilateral trade negotiations can be expected to result in global commitments very similar to those of NAFTA. For example, the North America tariff wall for a number of key sectors remains substantial. Canada currently retains a 17.5 percent tariff on key telecom equipment. In addition, Canada has the advantage of shipping these products duty free into the U.S. while our competitors there face a 8.5 percent tariff. The proposed Information Technologies Agreement, if implemented, would eliminate these tariffs by the year 2000. This can be expected to have an investment as well

as trade impact. Similarly, discussions are taking place with a view to a broader package of zero for zero initiatives, all of which would to some extent ameliorate the relatively recent acceleration of the "Fortress North America" phenomenon.

Conclusions

The broadening of commercial relations between the three North American economies is expected to continue in the future because of NAFTA, the close geographic proximity and very strong investment linkages. Deeper North American economic integration offers potentially large economic benefits in terms of improvements in productivity and real incomes. The improved economic performance would also improve the social outlook in Canada. However, to fully realize the potential gains, Canada must become a highly competitive North American location for international business and innovation activities, and effectively manage all the other challenges discussed above. The obverse is also true: failing to meet these challenges would seriously undermine Canada's future economic and social outlook.

This paper suggests an in-depth future research agenda in several key economic and non-economic areas (see Annex I). A number of on going research projects at Industry Canada, however, would shed some light on many of these research issues (see Annex II).

Annex I

What Needs to be Known

The above-mentioned challenges give rise to a host of issues which require in-depth analysis.

To improve Canada's relative productivity performance.

- ☐ What has been the impact of North American integration on industrial restructuring and rationalization in Canada? To what extent has the composition of output, trade and investment shifted from low value-added, resource-intensive industries to high-value added, knowledge-intensive industries in the wake of FTA/NAFTA?
- ☐ What types of micro-economic policies are needed to enhance innovation and expand the knowledge-base in Canada so that Canada's relative productivity performance can be improved?

To attract and retain quality investments in physical capital and R&D.

- ☐ How important are state and provincial government tax concessions and investment incentives in influencing the location decisions of firms? What can be done to ensure that competitive bidding for foreign investments does not substantially distort the investment decisions of firms? The United States is our main competitor. We need to know more about their incentives/subsidies system and its potential impact on the investment location decisions of firms in North America.
- ☐ To what extent is the quality of life an important locational determinant of foreign investment?
- ☐ What are the future needs of public infrastructure (including transportation infrastructure) for improving Canada's competitive position and facilitating North American integration?
- ☐ It is often argued that under deeper North American economic integration wide swings in the value of Canadian dollar are not conducive to the location of production, investment and innovation activities in Canada. In this context, it would be very useful to undertake a detailed analysis of the viability, and potential costs and benefits of fixing or closely managing the value of the Canadian dollar in relation to the American dollar.
- ☐ Are non-NAFTA countries investing in Canada more than they were prior to NAFTA?

- ☐ In this context, a detailed comparative analyses of the Canadian investment climate, in relation to the United States, with a special reference to knowledge-based and service sectors would be very useful.
- ☐ How has North American integration affected the scale of innovation activities (R&D) undertaken by foreign firms in Canada? Are Canadian affiliates of US multinationals relocating more and more of their R&D activities to headquarters in the United States? By the same token, has North American integration led subsidiaries of other foreign multinationals in Canada to increase their R&D in the United States?

To attract and retain highly educated and skilled people in Canada.

- ☐ How have the differences in personal income tax structures between Canada and the United States influenced the migration decisions of knowledge workers? What is the trade-off between real disposable income and the quality of life in the migration decisions of knowledge workers?

To facilitate greater internal economic integration.

- ☐ How important are the remaining barriers to interprovincial mobility of goods, services, labour and capital; which sectors are mostly affected?
- ☐ Will the North American integration reduce the importance of inter-provincial trade?

To strengthen Canada's commercial linkages with overseas economies.

- ☐ What could governments do to further strengthen Canada's commercial relations with the emerging markets in Asia Pacific and South America?
- ☐ What factors best explain the low international participation rate of Canadian SMEs? Is the low participation rate primarily a reflection of their linkages with large Canadian exporters and investors?
- ☐ How might governments play a role in assisting Canadian-based firms in undertaking direct investments in high-growth markets in the Asia Pacific, the Americas, and Eastern Europe?
- ☐ To what extent does CDIA influence technology transfer and what measures can be taken to retain the core-competencies of Canadian-based firms in Canada while promoting CDIA?

- ☐ What are the potential effects of CDIA on capital formation, innovation and employment in Canada? Should the government be actively promoting direct investment abroad?

To defend Canadian interests on market framework policies

- ☐ How can Canada protect the interests of Canadian consumers and producers in the convergence negotiations in regional and international fora?

To protect Canadian interests on the social, cultural, environmental and labour fronts.

- ☐ What types of institutional changes/response are required to facilitate and manage effectively the structural adjustment resulting from increased North American integration?
- ☐ Will pressures to harmonize Canadian labour laws and regulations always work to Canada's advantage? What institutional challenges are required to protect Canadian interests? How real are the pressures for policy convergence and is the direction of this convergence necessarily downward?
- ☐ What will be the effects of pressures towards regulatory convergence over time? Specifically, how will this affect such issues as tax and environmental policy, health care, and pensions?
- ☐ What will be the overall impact of North American integration and the information revolution on Canadian social and cultural values?
- ☐ How has the FTA and NAFTA affected Canadian autonomy and sovereignty, in particular, with respect to policy making capacity?
- ☐ What is the trade-off between economic and non-economic interests? What can be done to improve the trade-off?
- ☐ What has been the contribution of cultural heritage to economic competitiveness? To what degree are economic and cultural objectives mutually supportive and what opportunities exist to capitalize on synergies? What combination of cultural development support tools and regulatory activities are required to ensure that the nascent new media industries in Canada will prosper?

Annex II

Research Workplans

The Micro-Economic Policy Analysis Branch of Industry Canada has commissioned a number of papers. The following studies will shed additional light on many of the issues and challenges associated with North American economic integration:

North American Integration: 25 Years Back and Forward, Jeffrey J. Schott and Gary C. Hufbauer, Institute for International Economics, Washington D.C.

The paper will review the silent integration of the three North American economies over the past quarter century, and discuss the relationship between North American economic integration and the two trade agreements: FTA and NAFTA. It will also discuss the likely scenarios for future commercial relations between the three economies: extension of NAFTA to South America, increased importance of APEC related trade issues, dramatic increase in trade protectionism in the United States, leading to major trade frictions between the three economies, etc., and assess the implications of integration for corporate behaviour, Canadian competitiveness, and market framework policies.

Responding to the Challenges: Corporate Response, Randall K. Morck, Stephen A. Jarislowsky Distinguished Professor of Finance, University of Alberta.

The purpose of this paper is to provide an analysis of the expected corporate response to increased international competition, trade liberalization, rapid technological changes and the information revolution. The paper will examine the continued trend of restructuring and downsizing as firms adopt more labour displacing technologies, the growth of strategic alliances and networks, expected international business developments, the globalization of multinational activities, the growth of stateless corporations, human resource developments in response to the changing nature of labour organizations, information networks and electronic communications and other dominant factors which will shape corporate behaviour and organizational models of the future.

Responding to the Challenges: Institutional Response, Ronald Daniels, Associate Professor of Law and Director of the International Business and Trade Law Programme and Dean, University of Toronto.

The objective of this paper is to undertake a comprehensive analysis of the likely evolution of institutions in the medium term and to examine what factors these institutions need to consider. Consideration will be given to framework policies (competition policy, regulatory environment, trade policy, tax policy, intellectual property), Canada's financial system and financial

environment, labour organizations of the future, the evolving role of the education and training system, and social assistance institutions (unemployment insurance, public pensions, welfare, etc.)

Investment Challenges in Canada, Ronald Giammarino, University of British Columbia.

The purpose of this paper is to examine the future capital investment needs of Canada (by level, types, sectors and regions), and the adequacy of Canadian savings to meet the investment requirements. It will also examine the possible role of foreign borrowing and foreign direct investment in meeting the investment needs in Canada.

Environmental Challenges, Brian Copeland, University of British Columbia.

The paper will first review the developments with regard to the use of natural resources and income distribution over the last 25 years in Canada and worldwide. Next, it will speculate over the likely developments in these two areas and their influence on economic growth, sustainable development, environmental degradation and income inequalities and likely government responses to these developments over the next quarter century.

Restructuring and Economic Performance, S. Magun.

Using firm level financial data and survey information, this study will first examine the extent and nature of restructuring in Canada over the last 10 years. Next, it will analyse the short to medium term impact of restructuring and re-engineering on firm performance in terms of sales, productivity, employment, wages and profitability. It will also examine the policy implications of the research findings.

Strategic Alliances by Canadian Companies, S. Magun.

The purpose of this working paper is to use financial data and survey information on 100 Canadian firms to explore the motivations for strategic alliances among companies in Canada and between Canadian and foreign companies, and to analyse their impact on firm performance. The research findings will be used to develop effective policies for facilitating and promoting the participation of Canadian firms in business alliances in Canada and abroad.

Trends in Intra-Firm Trade in Canada, R. Cameron, Industry Canada.

Using brand new trade data from Statistics Canada, this Industry Canada working paper will examine the nature and extent of intra-firm trade related to inward foreign direct investment, disaggregated by country of origin and industry. This research will enable us to draw some inferences about the impact of FTA on intra-firm trade, trade flows and specialization.

Stateless Corporations and the Nation State, S. Rao and C. Lee-Sing, Industry Canada.

This research paper, using a large micro database, examines the characteristics, strategies and performance of stateless (global), regional and domestically-oriented firms operating in North America, disaggregated by home country and industry. The research findings will be useful for developing Canadian trade, investment, innovation and market framework policies.

Investment Strategies of Canadian Firms, T. Chudy, G. McDougall and D. Swimmer, Industry Canada.

Using financial data and survey information, this research paper will analyse the investment patterns of medium to large-sized firms in Canada, and examine the interrelationship between investment in plant, machinery and equipment, R&D and human resources. The findings of the paper will be helpful in designing effective innovation and investment policies.

Asia Pacific Rim and Opportunities and Challenges for Canadian SMEs, S. Rao and A. Ahmad, Industry Canada.

Using micro, macro and survey data, this research paper analyses various opportunities and challenges for Canadian SMEs of the dynamic and fast growing Asian markets. The findings of the paper will be useful in developing effective policies for increasing the participation of Canadian firms in the region, especially SMEs.

Future International Trade Agenda, Randall Mark Wiggle, Associate Professor of Economics, Wilfred Laurier University.

The purpose of this paper is to review the evolution of international commerce and its relation to the world trade agreements in the Post-War period. It will outline several likely topics for future trade negotiations: technology issues, informal barriers to trade and investment, competition policy, labour standards, investment subsidies, structural policies, environmental regulations, cultural policies, etc. The paper will also explore the implications of rapid technological changes and increasing integration of the global economy for the existing international economic institutions such as WTO, World Bank, IMF, OECD, APEC and for the emergence of new international institutions over the next quarter century.

The Asia Pacific Region in the Global Economy: A Canadian Perspective, forthcoming Industry Canada Research Volume, General Editor: Rick Harris, Simon Fraser University.

Fifteen interrelated research papers examine various aspects of past, current and future trends in commercial relations between Canada and the Asia Pacific region. The research findings will be helpful in developing policies for increasing business participation of Canadian firms in the region.

Capital Market Issues, forthcoming Industry Canada Research Volume, General Editor: Paul Halpern, University of Toronto.

In collaboration with the Financial Research Foundation of Canada, fifteen interrelated papers are commissioned for examining various capital market issues in Canada. The research agenda addresses a number of timely financing issues confronting small business in Canada, problems facing high-tech firms and financing problems facing large firms. In addition, the research examines venture capital financing and provides an assessment of several recent financing initiatives. Key papers are being used for the small business agenda, the department's work and submissions to Finance on the review of financial institutions legislation and internal review of labour sponsored venture capital.

Selected References

The following Industry Canada publications were consulted in preparing this paper:

Business Development Initiatives of Multinational Subsidiaries in Canada, Julian Birkinshaw, University of Western Ontario, under contract to Industry Canada, 1995.

Canadian-Based Multinationals: An Analysis of Activities and Performance, Industry Canada, Micro-Economic Policy Analysis Staff including Someshwar Rao, Marc Legault, and Ashfaq Ahmad, 1994.

Canadian-Based Multinationals, Steven Globerman ed., Industry Canada Research Series, 1994.

Competition Policy As a Dimension of Economic Policy: A Comparative Perspective, R.D. Anderson and S. Dev Khosla, Economic and International Affairs Branch, Bureau of Competition Policy, Industry Canada, 1995.

Corporate Globalization through Mergers and Acquisitions, Leonard Waverman ed., Industry Canada Research Series, 1991.

Corporate Decision-Making in Canada, Ronald J. Daniels and Randall Morck eds., Industry Canada Research Series, 1995.

Economic Integration in North America: Trends in Foreign Direct Investment and the Top 1,000 Firms, Industry Canada, Micro-Economic Policy Analysis Staff including John Knubley, Marc Legault, and Someshwar Rao, 1994.

Eliminating Barriers to Employment Growth and Job Creation, Gunderson, M. and W.C. Riddell, under contract to Industry Canada, mimeo, 1994.

Foreign Direct Investment and APEC Economic Integration, Ashfaq Ahmad, Someshwar Rao and Colleen Barnes, Micro-Economic Policy Analysis, Industry Canada, 1996.

Foreign Investment, Technology and Economic Growth, Donald McFetridge ed., Industry Canada Research Series, 1991.

Formal and Informal Investment Barriers in the G-7 Countries: Summary and Conclusions, Industry Canada, Micro-Economic Policy Analysis Staff including Ashfaq Ahmad, Colleen Barnes, and John Knubley, 1994.

Infrastructure and Competitiveness, in collaboration with the John Deutsch Institute, Jack Mintz and Ross S. Preston eds., 1994.

International R&D Spillovers Between Industries in Canada and the United States, Jeffrey I. Bernstein, Carleton University and the National Bureau of Economic Research, under contract to Industry Canada, 1994.

Multinationals in North America, Lorraine Eden ed., Industry Canada Research Series, 1994.

Multinationals as Agents of Change: Setting a New Canadian Policy on Foreign Direct Investment, Lorraine Eden, Carleton University, under contract to Industry Canada, 1994.

Technological Change and International Economic Institutions, Sylvia Ostry, Centre for International Studies, University of Toronto, under contract to Industry Canada, 1995.

The Economic Impact of Mergers and Acquisitions on Corporations, Gilles McDougall, Micro-Economic Policy Analysis, Industry Canada, 1995.

The Implications of Knowledge-Based Growth for Micro-Economic Policies, Peter Howitt ed., Industry Canada Research Series, 1996.

World Mandate Strategies for Canadian Subsidiaries, Julian Birkinshaw, Institute of International Business, Stockholm School of Economics, under contract to Industry Canada, 1996.

Other Publications

Conference Board of Canada (The). *Canadian Trade Policy Options in the Asia Pacific Region: A Business View*. Report 122-94. Ottawa: the Board, 1994.

Economic Council of Canada. *Venturing Forth: An Assessment of the Canada-U.S. Trade Agreement*. Ottawa: Supply and Services Canada, 1988.

Global Competitiveness Report 1996. Geneva: World Economic Forum

Harris, R.G. and D. Cox. *Trade, Industrial Policy, and Canadian Manufacturing*. Ontario Economic Council Research Study, 1983

Helliwell, J. "Do National Borders Matter for Quebec's Trade?" Annual Meetings of the Canadian Economic Association, June 1995.

McCallum, J. "Do National Borders Matter: Canada-U.S. Regional Trade Patterns." *American Economic Review*, June 1995.

Porter, M.E. *The Competitive Advantage of Nations*. New York: The Free Press, 1990.

Porter, M.E. and the Monitor Company. *Canada at the Crossroads: The Reality of a New Competitive Environment*. Ottawa: Business Council on National Issues and Supply and Services Canada, 1991.

Rao, P.S. *Global (Stateless) Corporations and the Internationalization of Business: Implications for Canada and Canadian Marketplace Framework*, Industry and Science Canada, mimeo, 1993.

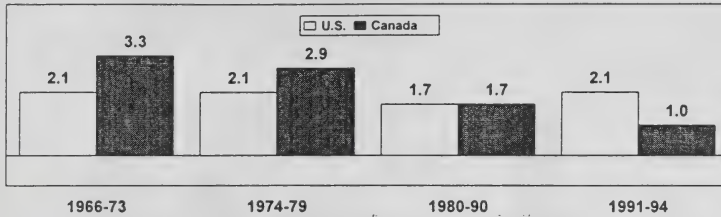
Hirshorn, R. *FDI and Market Framework Policies in APEC Member Economies*, forthcoming Industry Canada Discussion Paper, 1996.

Preston, Ross. S. and Haider M. Saiyed. *The Impact of Foreign Direct Investment on Job Creation and Economic Growth: Evidence from the WEFA Canada Macro Economic Model*, Wharton Economic Forecasting Associates, 1996, under contract to Industry Canada and Department of Foreign Affairs and International Trade.

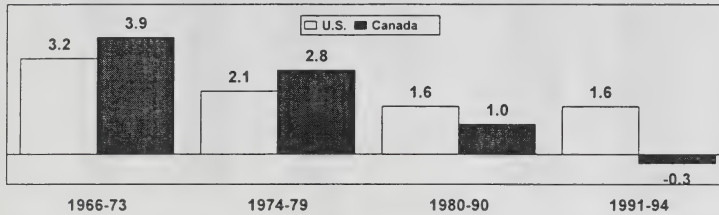
Rugman, A. and J.R. D'Cruz. *Fast Forward: Improving Canada's International Competitiveness*. Toronto: Kodak Canada, 1991.

Chart 1
Average Annual Growth in Real GDP Per Capita and
Real Personal Disposable Income Per Capita, Canada and the U.S.

Average Annual Growth in Real GDP Per Capita (Percent)



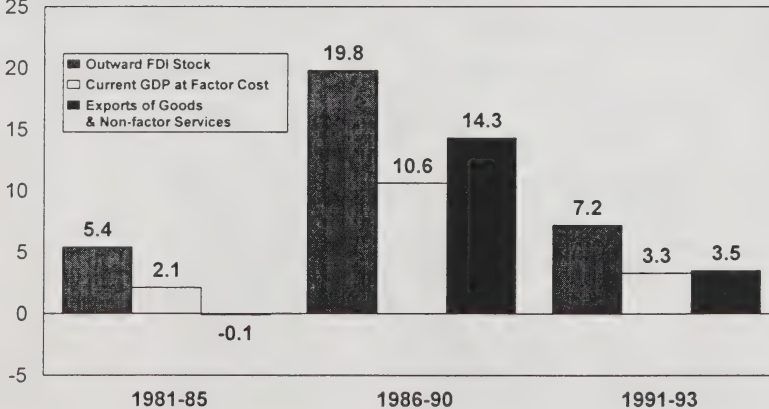
Average Annual Growth in Real Personal Disposable Income Per Capita (Percent)



Source: Statistics Canada, Provincial Economic Accounts; Consumer Price Index; Historical Labour Force Statistics; US Department of Commerce, Statistical Abstract of the United States, Business Statistics of the United States, C.M. Slater, editor

Chart 2
Average Annual Growth of Global Outward FDI Stock,
Current GDP at Factor Cost, and Exports of Goods and
Non-factor Services

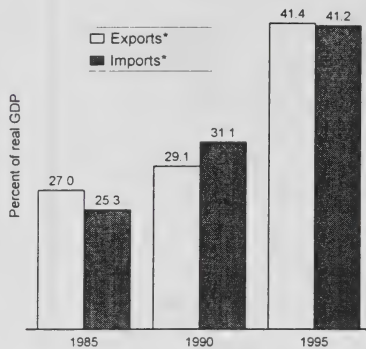
Percent



Source: World Investment Report 1995, Transnational Corporations and Competitiveness United Nations.

CHART 3

A marked Increase in Canada's Trade Orientation



Source: Compilations based on data from various sources.

Importance of International Investment is also Growing

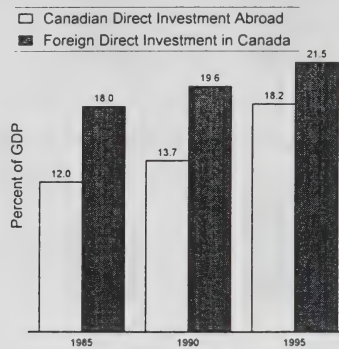
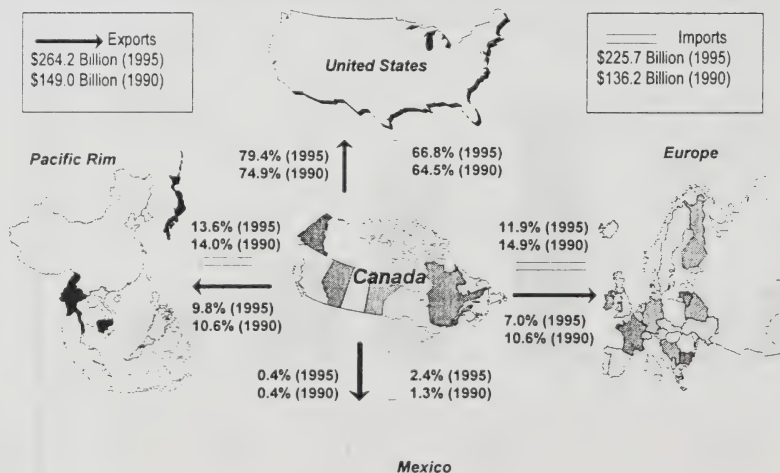


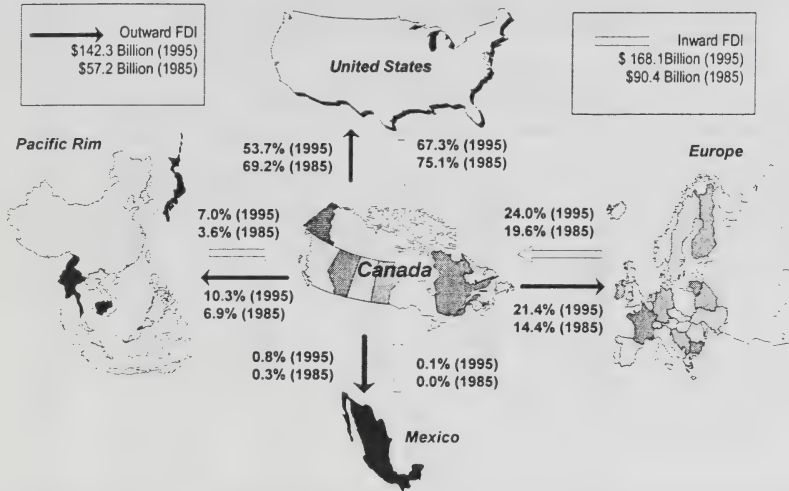
Chart 4

Distribution of Canadian Merchandise Exports and Imports, 1990 & 1995 by Selected Regions (Percent of Total and \$ Billions)



Source: Industry Canada compilations using Statistics Canada data.

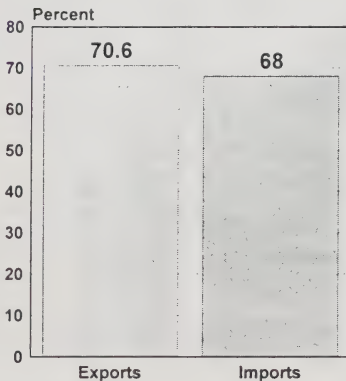
Chart 5
Distribution of Inward and Outward FDI Stock of Canada, 1985 & 1995
by Selected Regions (Percent of Total and \$ Billions)



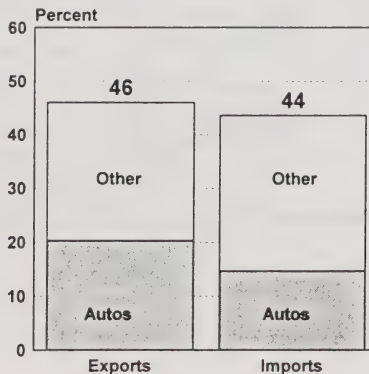
Source: Industry Canada compilations using Statistics Canada data.

CHART 6
Canada's Trade is Dominated by
Intra-Company Trade of U.S. MNEs

Proportion of Intra-company Trade of
U.S.- Controlled Firms Based in Canada, 1992

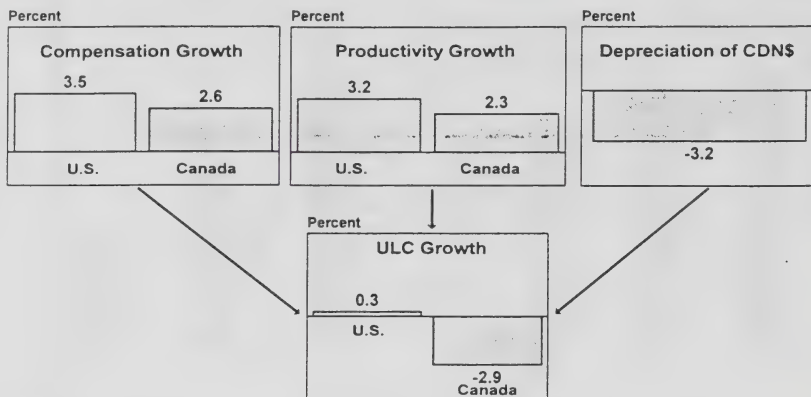


Intra-company Trade of U.S.-
Controlled Firms as a Proportion of
Total Canada-U.S. Trade, 1992



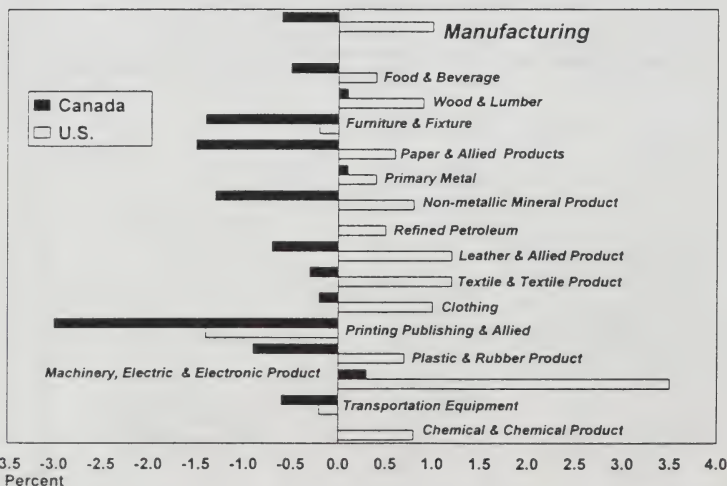
Source: Compilations based on Statistics Canada and U.S. Dept. of Commerce data.

CHART 7

An Improved Cost Position Fuels the Recent Export BoomAverage Annual Growth of the Components of Unit Labour Cost (ULC)
1990-1995

Source: Compilations based on U.S. Bureau of Labour Statistics

Chart 8

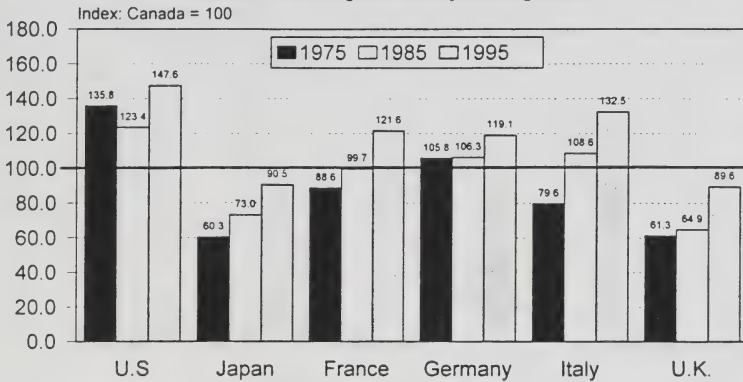
**Total Factor Productivity Growth in Manufacturing Industries,
Canada and the United States, 1985-1992**

Source: Industry Canada compilations using data from Statistics Canada.

CHART 9

Canada is Losing Ground in Productivity

Manufacturing Labour Productivity Levels, G-7
Based on Purchasing Power Parity Exchange Rates*



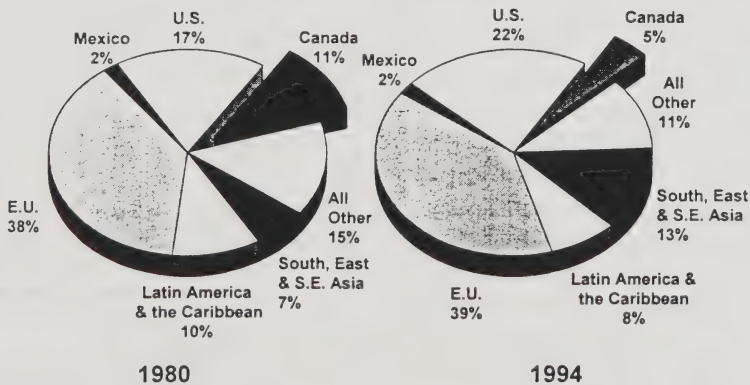
* Output per Person-Hour

Source: Based on data from U.S. Bureau of Labour Statistics

CHART 10

Canada's Global Share Declined Markedly

*Distribution of Inward FDI Stock
Canada and Major Countries/Regions, 1980 & 1994*



Source: World Investment Report 1995, Transnational Corporations and Competitiveness, United Nations.

4

Environment and Sustainable Development

The environment does not exist as a sphere separate from human actions, ambitions, and needs, and attempts to defend it in isolation from human concerns have given the very word "environment" a connotation of naivety in some political circles. The word "development" has also been narrowed by some into a very limited focus, along the lines of "what poor nations should do to become richer", and thus again is automatically dismissed by many in the international area as being a concern of specialists, of those involved in questions of "development assistance".

But the "environment" is where we all live; and "development" is what we all do in attempting to improve our lot within that abode. The two are inseparable.

Foreword to Our Common Future (1987) by Gro Harlem Brundtland, Chairman of World Commission on Environment and Development.

Description of the Issue

As the quote suggests, the Brundtland Commission got a lot right. Its lasting legacy is likely that it gave common currency to the expression "sustainable development", which it defined as development which "meets the needs of the present without compromising the ability of future generations to meet their own needs". Since Brundtland, governments around the world, individually and collectively (e.g. Rio in 1992), have tried to translate the concept into reality.

The Government of Canada, in Canada's Green Plan (1990), interpreted sustainable development as "harmonizing our environment and our economy". Creating Opportunity (1993) defined

it as "integrating economic with environmental goals". Consistent with Rio and Agenda 21, A Guide to Green Government (1995) widened the interpretation by identifying a social as well as an economic and environmental dimension to sustainable development. Similarly, the amendments to the Auditor General Act (which received royal assent in December 1995) stated that sustainable development is a "continually evolving concept based on the integration of social, economic and environmental concerns".

The Evolving Environmental Agenda

The most challenging environmental and sustainable development issues facing society today range from local to regional to national and global. They are far-reaching and diverse including ensuring sustainable renewable

Environment . . . And Health

The quality of our environment can have important implications for the health and well-being of Canadians. Some examples:

- **Toxic Substances** — Through long range transport of pollutants, polychlorinated biphenyls (PCBs), pesticides, and heavy metals are appearing in the Arctic, thousands of kilometres away from their sources. These substances tend to accumulate in the food chain and may represent the most significant threat to the Arctic ecosystem and to human health. The inhabitants of Canada's North, largely aboriginal peoples, are already being affected. Recent studies have shown that 63 percent of children and 39 percent of women of childbearing age exceeded Health Canada's acceptable levels of PCBs in their blood.
- **Ozone Depletion** — Through the use of ozone depleting substances such as CFCs, halons, and methyl bromide, the integrity of the ozone layer has been disrupted resulting in increased ultraviolet (UV) radiation and posing a major threat to all life on earth. Increased UV exposure has been linked to serious health risks including some forms of skin cancer, suppression of immune systems, and cataracts. The U.S. EPA estimates that for every 1% decrease in the ozone layer, melanoma mortality increases by 1-2%. While meteorological variation causes some year-to-year variability, Environment Canada reviews show that for the first six months of 1995, in Canada total stratospheric levels were 9.5% below normal. By the end of the century, it is predicted that mid-latitude ozone losses in winter/spring will be 12-13%.
- **Climate Change** — refers to the warming of the earth's atmosphere due to human generated emissions of greenhouse gases (carbon dioxide, nitrous oxides, methane, and chlorofluorocarbons). The implications of climate change include an increase in loss of life from heat-related mortality and severe storms, and increase the range of diseases such as malaria, dengue fever, and cholera.
- **Smog (ground-level ozone, suspended particulates)** — Health Canada data show there is a direct link between smog levels and hospital admissions with no apparent lower threshold. The biggest problems are in the most populated areas — the lower Fraser Valley, the Windsor-Quebec City corridor — and in areas subject to transboundary flows of pollution — southern New Brunswick and southwestern Nova Scotia.

resources development, conservation of our water resources, improving air quality, conserving biodiversity, minimizing our exposure to toxic substances, reducing greenhouse gases emissions, and the recovery of the ozone layer. Due to their transboundary nature, many of these issues have both a local and a global dimension — requiring effective action at both levels.

Concerns About Environment . . . Enduring and Widespread

Canadians concerns about environmental issues — as well as environmental values -- are enduring and closely linked to concerns about human health, future generations, and the economy. (Synergistics, 1995; Environics, 1994, 1995; Ekos, 1996)

- ☐ Canadians remain very concerned about specific environmental problems. *Sixty-four percent believe that their health has already been affected by pollution.* Three issues in particular — toxic substances, air quality, and water quality — have over the last ten years consistently been top environmental concerns.
- ☐ *Canadians concern about the environment and sustainable*

development is driven to a large degree with their concern about the legacy to future generations. For instance, in spite of current economic problems, only 15 percent of Canadians think we should look after the present generations and let future generations look after themselves — while over six in ten *strongly* disagreed with this approach.

Environment . . . And Economy

➤ Sustainable Natural Resources Management —

Much of Canada's wealth is based on its rich endowment of natural resources. For the many Canadians dependent on the natural resources sector, the sustainability of the resource is linked not only to job security but also to a way of life that has supported their communities for decades.

Thousands of Canadian communities and one in thirteen Canadians depend on a productive resource base and healthy ecosystems for their employment in resource industries, and in tourism and recreation.

➤ Environmental Industries —

The Canadian environmental sector has become a significant contributor to the Canadian economy, with annual revenues of \$11 billion. It is one of Canada's fastest growing export sectors, predicted to grow by about 15% per year. The sector's 4,500 firms, most of which are small or medium sized, employ over 150,000 Canadians. The world market for products and services is estimated at US\$450 billion today, and is expected to grow to US\$600 billion by 2000.

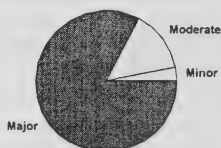
➤ Eco-efficiency —

is an important dimension of productivity. It means producing more with less — less resource inputs, less waste. Many environmental improvements, including better energy and water efficiency, waste minimization, and pollution prevention are achieved by, or result in, the reduction of inputs — which translates into a reduction in costs.

- ❑ *Canadians expect continuous improvement in environmental protection regardless of the state of the economy.* Throughout the 1990s, eight in ten Canadians have consistently supported strict enforcement of environmental regulations. They do not believe that environmental protection necessarily comes at the expense of jobs.
- ❑ *Canadians want Canada to play an environmental leadership role internationally* — 80% see environmental heritage, along with democracy, peacekeeping, justice, and tolerance, as typical Canadian values.
- ❑ Recent work by the Environics 3SC Monitor in 1994 and 1995 concluded that *only two of 23 symbols resonated with all segments of the Canadian population — medicare and the natural environment.*

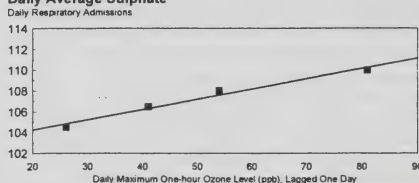
Figure 1: Trends

Priority for Sustainable Development in the Next Decade



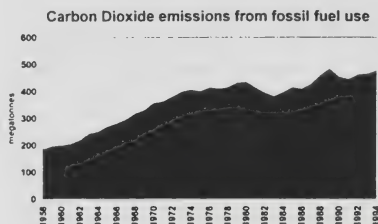
Source: The Environmental Monitor, 1995

Daily Respiratory Admissions versus Daily Average Sulphate



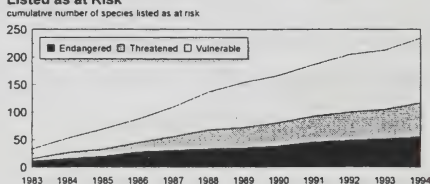
Source: Health Canada, October 1995

Green House Gas Emissions



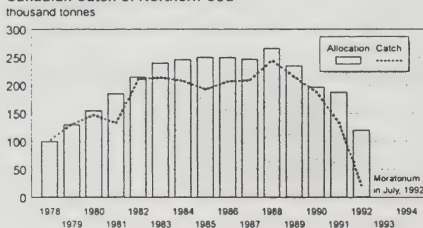
Source: Environment Canada

Number of Canadian Species Listed as at Risk

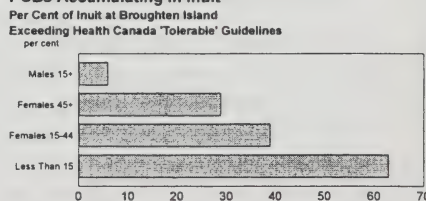


Source: Canadian species at risk, April 1994, COSEWIC

Canadian Catch of Northern Cod



PCBs Accumulating in Inuit



Source: SOE Report, 1995

A Mixed Record

The understanding of, and the social consensus on, environmental and sustainable development issues has grown considerably over the last decade. Canadians from all walks of life are increasingly integrating environmental considerations in their day to day decision making:

- ❑ Through a range of policy instruments — from regulatory to voluntary — *governments* have taken action on a number of fronts to improve decision making. All governments in Canada have sustainable development plans or strategies. All governments have environmental assessment legislation. And through voluntary partnerships such as the National Packaging Protocol, the North American Waterfowl Management Plan, and ARET — progress has been made on waste reduction, migratory bird management, and the reduction/elimination of toxic wastes.
- ❑ At the *private sector* level, many companies are designing environmental management systems (EMS) to integrate environmental considerations into their activities, processes, and products. In 1994, KPMG Management Consultants carried out a survey of Canadian companies, hospitals, municipalities, universities, and school boards — which showed that 69% had EMS in place.
- ❑ At the *community level*, volunteer organizations and municipalities have initiated a range of activities. Seventeen communities within the Great Lakes have become involved in the development of remedial action plans for waterfront areas. Restoration of Cootes Paradise in Hamilton harbour, the largest wetlands restoration project in North America, was accomplished by local organizations. Municipalities have also become leaders in the implementation of recycling and waste diversion programmes.

The results of these efforts have been mixed. In some areas, we have made significant progress on environment and sustainable development issues, for example:

- ❑ *Canada's record in conserving mammal and bird species is among the best in the OECD* (eg., whooping crane saved from extinction, white pelican no longer at risk). At the same time, the number of species at risk has grown considerably in the last 20 years, and at this time 8% of our mammals and 4% of our bird species are listed as threatened. Efforts to protect their habitat and to preserve representative areas have led to a considerable growth in protected areas.
- ❑ *Efforts to renew the Great Lakes-St. Lawrence has led to major improvements in environmental quality.* There has been a noticeable decline in PCBs in fish and in herring gull egg samples, Lake Erie once considered dead, now supports the largest freshwater fishery in

Canada. Point source emissions in the St. Lawrence have declined significantly — the 90% reduction target for toxic liquid effluent from 50 priority plants was exceeded.

- ❑ *Considerable progress has been made in Canada in reducing certain contaminants to the atmosphere.* For instance, atmospheric concentrations of lead, a substance known to have numerous adverse affects on human health, have fallen dramatically since the early 1970s. Sulphur dioxide emissions — a major contributor to acidic deposition — were cut almost in half in Canada between 1980 and 1994. Further, Canada has been an international leader in the elimination or phasing out of substances known to deplete the ozone layer, such as CFCs.

In other areas, progress has been more difficult both on domestic issues as well as issues with a global dimension. (SOE Report, 1996; OECD, Environmental Performance Review, 1995)

- ❑ *The smog problem is the same as it was in the mid-1980s* — in particular it has not diminished significantly in the lower Fraser Valley, the Windsor-Quebec City corridor, and southern New Brunswick - southern Nova Scotia.
- ❑ *Municipal wastewater discharges have increased since 1983 — a major source of pollution in many communities.* Also, while more than 6 million Canadians rely on groundwater for their water supplies, recent surveys suggest that between 20% and 40% of all rural wells may be contaminated by fecal coliform bacteria and nitrates.
- ❑ While efforts have been made to reduce municipal waste — with some progress particularly in terms of reducing packaging waste — *Canada still generates about 20% higher per capita waste than the OECD average.* Municipal waste increased 27% between 1980 and 1990.
- ❑ While Canada has abundant water resources — *Canadians are among the world's largest water users* on a per capita basis.
- ❑ *Canada is one of the most energy intensive OECD countries*, both in terms of per capita and of GDP related energy intensity.
- ❑ Further, despite international agreement and commitment on stabilizing greenhouse gas emissions, current projections indicate that without further mitigative action, *Canada's greenhouse gas emissions in the year 2000 could be 13% higher than in 1990.* From a global perspective, the Intergovernmental Panel on Climate Change estimates that global temperature increases could range from 1.0 to 3.5°C, with sea level increases expected to rise between 3 to 8 cm per decade over the next century.

Within Canada, climate change is projected to have the greatest impact in the Arctic. For instance, it is projected that warming in the Canadian arctic during the winter could be by as much as 8 to 12 degrees over the next century.

- ❑ *Canada's Arctic is a sink for airborne pollutants.* A recent UN study estimated that the Canadian Arctic receives six tonnes of PCBs each year through the atmosphere — habitants of Broughton Island off of Baffin Island have the highest PCB levels found in any human population, with the exception of humans exposed to contamination from industrial accidents.
- ❑ Despite the significant progress made in the Great Lakes-St. Lawrence, *6300 industrial plants, located in 140 riverside municipalities, continue to discharge untreated wastewater into the St. Lawrence* — a daily discharge of 500 million litres. As a result the stocks of many fish species are declining or destabilized (eg. Snow crab, Atlantic Sturgeon.)

Despite the significant progress we have made in many areas, it is clear from the scope and magnitude of the issues — affecting Canadians in all regions — that we are facing serious environmental problems in Canada and globally that will affect our health and well-being well into the next century.

Looking to the Future

The Issues Are Complex and Long term

When we examine the nature of environmental challenges that we are facing now -- as compared to the issues of a decade ago — it is clear that many of the same issues remain. A decade ago, we were concerned about toxic substances in the Great Lakes. While we have made significant progress in restoring ecosystem health, over 360 chemical pollutants have been identified in the Great Lakes. The Montreal Protocol on Ozone Depletion was signed almost a decade ago. Since then, while we have made progress, due to the persistent nature of ozone depleting substances, it is estimated that even at the current rate of decline in ozone depleting substances, the ozone layer will only begin to recover in the well into the next century — with predictions of complete recovery by approximately 2050 (WMO 1994). At the same time, securing stronger commitment from developing countries is critical to the final success of the Montreal Protocol. If the current trend towards increased consumption of CFCs in developing countries continues unchecked, this could soon negate the gains made through developed country phase-outs, and seriously impair ozone layer recovery.

Clearly, the environment and sustainable development issues are complex and long term. They require effective action at both domestic and international levels. They also require an indepth understanding of human and natural systems — and their interaction. For instance, to understand and deal with an issue like climate change, it is necessary to consider issues related to transportation, energy, urban planning, agriculture, forestry, and oceans.

Uncertainty

Policy decisions must be based on the best science and analysis available.

However, in many areas we do not understand the full risks involved in the flow of toxic substances and waste into the environment, or the implications of disturbance of the global processes that maintain the biosphere, such as climate regulation and species diversity.

Much of the recent congressional debate about risk has been based on the assumption that environmental policy could or should be essentially science driven. That assumption is flawed in two respects: first, the scientific tools available today are not precise enough to yield crisp answers about risk; and, second, subjective, value-laden decisions influence every step of the process. Neither risk assessment nor environmental policy can be made objective. Nevertheless they can be improved.

National Academy of Public Administration, 1995.

We have observed however that as our understanding of environmental issues grows, we also realize that human and environmental sensitivity is greater than previously thought. For instance, while lead's use has been restricted in Canada, researchers are now finding that the metal is very toxic even at low levels. The Centers for Disease Control in the United States announced in 1991 that effects on the central nervous system of children begin at 10 micrograms per decilitre — 75% lower than

concentrations deemed safe in 1971. Further, our understanding of the cumulative effects of "safe" levels is also not fully developed — and there are growing concerns that the chemical-by-chemical or the species-by-species approach that has dominated our scientific and management strategies may mask some of these interactions. In some areas, the challenge being posed is even more serious as we consider the implications for future generations of irreversible change or losses to the environment — such as extinction.

The Forces of Environmental Change

In considering the range of issues that we will have to deal with over the next decade or so — climate change, toxics, biodiversity, ozone depletion, natural resource — there are three key factors which affect not only the scale and complexity of the issues, but which also define and limit our capacity to respond: population growth; industrialization of the developing world; the information revolution. These forces are not static — they are interdependent and subject to change.

Population Growth: Growing populations are driving an expanded consumption of resources at both global and domestic scales. Since 1950 the global population has doubled. In the next fifteen years it is estimated by the UN to increase by one and a half billion. Population growth, however, is also a domestic problem. Canada has one of the highest rates of population growth amongst developed countries and this growth is concentrated in the lower Fraser Valley and in Southern Ontario. Over the next 15 years the population of Ontario is projected to increase between 30 and 50%. This population growth will likely translate into more significant environmental impact on a per capita basis than in the developing world. The average Canadian, for example, is responsible for 11 times the amount of energy and 4 times the amount of water use of the average Chinese.

Industrialization of the developing world: The effects of developing world industrialization will be to magnify the resources consumed by a growing population. The result is that demand for food, energy and materials for shelter and infrastructure are growing and will continue to grow faster than the rate of population growth. For example, since 1950 global grain consumption has tripled, water use has tripled, fish catch has increased 5 times, tropical hardwood consumption has increased 7 times and fossil fuel use has increased 24 times. Much, though not all, of future increases in consumption will be driven by the growing wealth of the developing world. According to Japanese government statistics, manufacturing output in Asia alone is projected to increase anywhere from 3 to 8 fold and the number of automobiles may increase in number from 91 million to 522 million by 2025. The subsequent effects on human health in the increasingly congested Asian cities and on local and global ecosystems will likely increase in rough proportion.

My argument also helps us rethink the issue of limits to growth, and in the process it helps us to understand why, in many cases, resource scarcity does not impede growth of prosperity, while in other cases it contributes to long term economic decline. The limits a society faces are a result of the interaction of the society's physical context with the ingenuity the society can bring to bear on that context. If human could supply infinite ingenuity, then the maximum sustainable limit for population and consumption would be determined by physical law. Since infinite ingenuity is never available, the limits societies face are more restrictive than this theoretical maximum. And, since the supply of ingenuity depends on many social and economic factors and can therefore vary widely, we cannot determine a society's limits solely by examining its physical context.

The Ingenuity Gap: Can Poor Countries Adapt to Resource Scarcity, Thomas Homer-Dixon, 1995.

Technological change: The 'wild card' in this process of expanding human activity is technology. The key variable in the environmental impact equation, is not population numbers alone but the technologies by which a given population relates to available resources. The cost of information technologies is halving every 18 months, as the capacity of such technologies is doubling. At the same time, information and ideas are replacing materials as the most significant determinant of national productivity and national competitiveness. The information revolution, in both its technological and social aspects holds out the promise of providing the means by which wealth can be generated in a less material intensive and less polluting manner. It will increase our capacity to monitor ecological change, and it will increase our capacity as societies to perceive, disseminate and respond to emerging environmental problems.

Based on past experience, however, technological change will bring both environmental improvements and pose environmental risks to human health and ecosystems. Development of technological substitutes was critical to enabling Canada meet its goals on ozone depletion. And it is through the transfer of technologies such as these that we may be able to mitigate the implications of the rapid population and economic growth on the environment. At the same time, the accelerating rate of technological change, enabled by information technologies will lead to new risks. New chemicals will have to be assessed for toxicity and new product and process technologies will have to be assessed for environmental effects.

The bottom line is that the nature and scale of environmental risks is changing. If the projected doubling in global economic activity over the next 15 years is based on the same technologies in use today the number of environmental pressure points will increase. As noted by Bruce Mitchell (1996,) "Unfortunately, society is often not stimulated to action until a crisis occurs and acute problems emerge". This is clear when one examines the social consensus that emerged on the importance of environmental issues at the end of the 1980s — following environmental accidents such as the Chernobyl, the Hagersville tire fires, the St-Basile Le Grand PCB fire, and the Exxon Valdez oil spill. An ongoing challenge will mobilize support for the longer term chronic issues such as biodiversity, climate change and the accumulation of toxics - to deal with issues before they become environmental emergencies.

Sustainable Development Context

As Mrs. Brundtland noted in the quotation cited at the beginning of this paper, the environment does not exist in a vacuum. Environmental policy objectives need to be pursued in an integrated way with economic and social objectives — this is the essence of sustainable development.

Economic linkages

There are many linkages between environment and economic policies. Economic considerations need to be integrated into environment policies, for example through the use of market-based and other innovative policy instruments. Environmental considerations also need to be integrated into economic policies, such as taxation and trade policies. The relationship between environment and competitiveness is emerging as a likely key factor in determining the speed of adjustment to the environmental challenge set out above.

Concerns have been raised about the competitiveness impacts of Canada's regulatory regime. The Standing Committee on Natural Resources in its December 1995 Interim Report *Streamlining Environmental Regulation for Mining* found that "Canada's regulatory system constitutes a major impediment to the health of the [mining] industry, particularly in terms of delays and uncertainties that it causes for the industry and the discouragement of investment that inevitably results from the regulatory burden". The Conference Board in a 1996 study *Lean Green* estimated that a more efficient regulatory regime could save Canadian companies in the manufacturing, mining and utility sectors some \$500 million to \$600 million per year.

Opinions differ on the extent to which there is a negative competitiveness effect. For example, an internal assessment by Environment Canada suggests that the Conference Board's estimates of cost savings are highly questionable. Others suggest that environmental measures can in fact promote competitiveness.

However, even if the concerns are misplaced or exaggerated, they may have a dampening impact on new environmental regulations. The concerns also promote an adversarial relationship between environmental and economic agendas, and lead to significant amounts of policy time being spent addressing them.

Moreover, whether Canada's current environmental regulatory regime is hurting or helping our competitiveness, the relative efficiency of Canada's regulatory regime vis-à-vis that of the U.S. has been identified as a factor in determining Canada's competitiveness in the increasingly integrated North American market (see paper on *Canada in an Integrated North America*). This emphasizes the need to take advantage where feasible of innovative approaches to environment policy.

Social dimension

While much remains to be done in the area of environment-economy integration, integration of social factors into the sustainable development equation lies even further behind.

Social factors are important to sustainable development in a number of quite different ways. One is through environment-health linkages. Research has shown that the quality of the physical environment is an important determinant of health; similarly, health is in many ways the driver of public concern for the environment.

Another set of linkages relate to issues of governance, decision-making, the role of communities, and equity. Aboriginal peoples are another important linkage. To give one example, despite a 20 year ban on DDT in Canada, residents of Northern Canada are still exposed to fresh incidence of the pesticide as a result of the long-range transport of airborne pollutants.

Another linkage is to regional development objectives, and how to reconcile these with environmental and resource conservation goals, both in the short and longer term. A concrete example of this issue has been the fishery on both the Pacific and East Coasts. Another example is likely to be the North.

Other linkages which are increasingly receiving attention are between environmental stress and conflict. A key issue is how water and food shortages arising from environmental degradation may, through the interplay of social factors, lead to international or intrastate violence.

A Canadian example of such a pressure point is the conflicts which arise periodically (e.g. Temagami, Clayoquot) over use of land and resources.

State of Knowledge — What We Know and Don't Know, and Proposed Research

This paper proposes a research agenda that will allow Canada to deal more effectively with the environmental challenge set out above, in a sustainable development context. It does so by identifying key elements that will contribute to this goal, noting the state of knowledge on those elements, and identifying research needs.

The key elements that will be discussed are

- ☐ indicators
- ☐ competitiveness linkages
- ☐ environment policy tools
- ☐ environmental considerations in economic policy
- ☐ science and technology
- ☐ social linkages
- ☐ institutional issues.

Indicators

Unless environmental stresses are known, they cannot be addressed.

Canada's National Environmental Indicators Program seeks to provide basic information on the extent and progress of environmental stresses in the Canadian context. Indicator bulletins have been published or are being prepared on issues such as acid rain, urban air quality, climate change, energy consumption, urban water, timber harvesting, and forest biodiversity. Considerable work is also underway outside the Program in specific sectors, e.g. forestry.

Work is also underway to develop sustainability indicators, without which decision-makers will not be able to determine whether government policies are improving the well-being of Canadians. A pilot study is testing the application of sustainability indicators in a regional context — the Fraser River Basin of British Columbia. A national workshop on urban sustainability indicators was held this spring. In general, however, there is a need for additional sustainability indicators to guide policy-making. The U.K. is one of the few countries to have attempted to compile indicators of sustainable development (*Indicators of Sustainable Development for the United Kingdom*, 1996). However, the U.K. publication is for the most part a set of independent environmental and economic indicators.

Some work on integrated indicators is underway. The World Bank has begun work on new, more sustainable measures of wealth that incorporate environmental and social aspects. Wealth is measured by considering the value of built capital, human capital and natural capital. In Canada, a

working group of the four natural resource departments (DFO, NRCan, AAFC and DOE) is being established to develop a strategy to value natural capital and develop economic indicators of sustainability in collaboration with Statistics Canada. Statistics Canada has also initiated ground-breaking work on environmental statistics and satellite national accounts; however, funding for this work runs out in 1997.

- ☐ **Interdepartmental work underway on indicators, including environmental indicators and the valuation of natural capital, must continue. In particular, research should be undertaken on how best to measure progress towards sustainable development. Work should also address the development of social indicators.**
- ☐ **Government should develop a capacity to model/scenario-build possible future states of the environment, economy and society.**

Canada is also participating in international work on indicators, including at the OECD on environmental indicators; at the UNCSD on sustainable development indicators; on sustainable forest management indicators related to the Montreal Process (a group of 12 countries accounting for 90 percent of the world's temporal and boreal forests); and in the context of Expo '98, where the theme is "Oceans — a Living Resource".

In North America, the Commission on Environmental Cooperation (CEC) has the mandate to consider and develop recommendations regarding approaches and common indicators for reporting on the state of the environment and ecologically sensitive national accounts. The CEC is, for example, currently working towards data compatibility methodologies for air toxics, a plant biodiversity inventory and information network for North American forest ecosystems, and on producing a printed and electronic map of the ecoregions of North America.

- ☐ **Canada should assist to the extent possible the development of global indicators, both on environmental stresses and on progress towards sustainable development.**

Competitiveness linkages

Without a good understanding of environment-competitiveness linkages, policy development will not promote the achievement of environmental and economic objectives, and may in fact work against sustainable development.

There is a well-recognized ambiguity in the interpretation of sustainable development. While all may agree on the need to integrate environment and economic policies, there are those who view this as the integration of fundamentally opposing objectives with a view to finding the appropriate balance or making the appropriate trade-offs, and those who view it as the integration of fundamentally consistent objectives.

The view that Canada's current environmental regulatory regime may damage our competitiveness was noted above. Perhaps the leading proponent of the thesis that there can be a positive relationship between environment and competitiveness is Harvard economist Michael Porter (e.g. in *Green and Competitive*, 1995, Harvard Business Review). Porter does not dispute that improperly designed regulations can reduce competitiveness; however, he also argues that properly designed regulations can help stimulate innovation and competitiveness.

Empirical evidence to date is inconclusive. The OECD, in a 1993 report (*Summary Report of the Workshop on Environmental Policies and Industrial Competitiveness*) found that the costs of pollution control are a small part of total costs in most sectors, and that the costs of compliance with environmental regulations have had little or no impact on the overall competitiveness of countries. However, it also found that environmental regulations may have more significant impacts — positive and negative -- in specific sectors. There is also the issue of the role competitiveness concerns may play in the development of new environmental policies (e.g. case of Canada's climate change program cited above).

Business is in many cases finding that good environmental practices can also be good for the financial bottom-line. The term "eco-efficiency" is frequently used to describe this concept (see for example the 1996 World Business Council for Sustainable Development report *Eco-efficient Leadership for Improved Economic and Environmental Performance*). In some cases this requires non-traditional approaches, e.g. viewing waste as an unused resource.

A number of policy and research initiatives are underway in Canada which address, directly or indirectly, environment-competitiveness linkages. The regulatory reform initiative is examining how to improve the regulatory process in specific sectors; Environment Canada is examining potential "irritants" in the form of federal-provincial environmental regulations; the Canadian Environmental Assessment Agency has launched a consultation process that addresses improving the efficiency of the environmental assessment process; CCME Ministers are working towards an accord which would include objectives and principles for effective environmental management; the Conference Board is launching an initiative on innovative environmental policy; the National Round Table on the Environment and the Economy is examining the concept of eco-efficiency.

The Sustainable Development Coordinating Committee (SDCC), chaired by the Deputy Minister of Environment Canada, recently called for an interdepartmental review of environment-competitiveness linkages. The immediate objective of the review is to lead to an improved common understanding of these linkages. The review is just getting underway.

- ☐ Research into environment-competitiveness linkages should be carried out, building incrementally on the review called for by SDCC Deputies. The research should include:

- an analysis of short-term and long-term effects
- the determinants of Canada's competitiveness vis-à-vis the U.S., and
- a consideration of sectoral differences.

The ultimate objective should be to facilitate the development of approaches to environmental management and economic policy which maintain and enhance both the quality of the environment and economic competitiveness.

Environment policy tools

As all countries struggle to achieve their environmental objectives, those countries which adopt innovative and economy-friendly approaches towards achieving them will have a competitive edge.

In Canada, as in most other countries, regulations have been the predominant environmental policy tool. There is considerable literature demonstrating that economic instruments, may, in principle, have economic efficiency advantages over regulations. A number of studies, by the federal and provincial governments and stakeholders, have examined the practical application of economic instruments to specific environmental problems in Canada. Despite this, Canada still has relatively few economic instruments in place (one exception is the tradeable allowance systems set up for ozone-depleting substances). The U.S. makes more use than Canada of trading systems, while a number of European countries make more use of tax-based instruments.

Voluntary approaches are increasingly seen as a viable alternative or complement to regulations and economic instruments. Two examples of such approaches in Canada are the ARET initiative which deals with toxic substances, and the Voluntary Challenge and Registry program in the area of climate change. The idea of "covenants" between government, industry and communities has received much attention recently. Covenants are used widely in the Netherlands; the NRTEE and DOE are currently examining their application in Canada.

Attention is also increasingly being focused on other innovative approaches to environmental policy, including the role of liability and insurance (see for example, *Improving the Climate for Insuring Environmental Risk*, Canadian Underwriter, August 1995) and the role of property rights and the Polluter Pays Principle (see for example, *Integrating Environment and Economy*, OECD, 1996).

- ❑ **Research is required on innovative approaches to environment policy in Canada. It should address**
- how regulations can best be designed to promote innovation and eco-efficiency
 - the appropriate use of voluntary approaches and covenants, and how they may be used in combination with regulations
 - how consumer concern for the environment can best be tapped through initiatives such as eco-labelling and eco-certification
 - the role of liability and insurance in changing corporate and personal behaviour
 - the role of the Polluter Pays Principle in the sustainable use of common property environmental resources
 - barriers to the use of economic instruments in Canada.

Environmental considerations in economic policies

An approach which focuses on protecting the environment through after-the-fact clean-up is doomed to be both environmentally ineffective and economically inefficient. A cost-effective approach to environmental issues must necessarily focus on incorporating environmental considerations in economic decision-making. Similarly, efficient government policy-making requires that environmental impacts and needs be addressed not after an economic policy has been implemented, but while it is being developed.

A good deal of progress has been made in integrating environmental considerations into economic policy. For example, as part of the Baseline Study, departments will be examining in their sustainable development strategies taxes, grants and subsidies, so as to identify possible barriers and disincentives to sound environmental practices.

Areas of environment-economy integration which have received particular attention are taxation and environment and trade and environment.

Taxation and environment was the subject of a special working group at the OECD, which released its final report earlier this year (*Implementation Strategies for Environmental Taxes*, January 1996). Domestically, work on taxation and environment has focused on seeking to ensure that the tax system does not impede the achievement of environmental objectives. The 1994 Budget established a Task Force on Economic Instruments and Disincentives which addressed this issue among others. Drawing on the recommendations of the Task Force, the 1995 Budget launched a study on whether there is a "level playing field" in the taxation of energy investments. This study in turn led to announcements in the 1996 Budget aimed at allowing renewable energy and energy efficiency investments to compete on more even terms with other energy investments. The 1995 Budget also drew on analysis by the Task Force, and others such as the NRTEE, in announcing an improved tax treatment for donations of ecologically sensitive land.

The longer term concept of "ecological tax reform" has also been examined by the NRTEE (see *Ecological Fiscal Reform: a Review of the Issues*, Resource Futures International, November 1995). This concept, in its full form, involves a restructuring of the tax system away from taxing "goods" such as income, and towards taxing "bads" such as pollution. The NRTEE's work essentially involved a "scoping out" of the concept.

❑ Research should continue towards ensuring that the tax system promotes sustainable development.

Ensuring the mutual compatibility of trade and environment policies is particularly important for Canada in view of our heavy dependence on trade, and our commitment to high environmental standards. Key issues of concern to Canada include the potential impact of environmental measures and consumer initiatives in other countries on Canadian resource sector exports, and ensuring that multilateral environmental agreements have the necessary flexibility under trade rules to be effective.

Work towards the integration of trade and environment policies began at the OECD in 1991 with the creation of a "joint session" of trade and environment experts. The joint session has had two major products: "procedural guidelines" on integrating trade and environment policies (approved by OECD Ministers in 1993), and the 1995 *Report to Ministers* which set out policy conclusions and directions for further work.

At the WTO, the Committee on Trade and Environment (CTE) has been charged with examining the relationship between trade rules and environmental measures, in order to promote sustainable development. The CTE will report on its progress to the WTO Ministerial in Singapore in December.

Research on other aspects of trade and environment linkages has also been conducted by other organizations such as the United Nations Environment Program (UNEP) and the United Nations Conference on Trade and Development (UNCTAD). In North America, the Commission for Environmental Cooperation (CEC) has a work program focused on improving environmental cooperation in the context of increased North American trade linkages.

An area which has received relatively little analysis is the appropriate response of environmental policy to the phenomena of free trade and globalization. For example, should there be increased focus on international harmonization? Should the NAFTA approach of the environmental side-agreement and the CEC be followed at the multilateral level, or is some other approach more appropriate?

- ❑ Research should continue towards promoting the mutual compatibility of trade and environment policies. There should be a particular focus on
- the appropriate environmental response to global free trade and globalization in general, e.g. the role of harmonization, the appropriateness of the NAFTA model
 - how to break down the mistrust between developed and developing countries which is slowing progress on this file
 - how to reconcile the life-cycle focus which characterizes much of environment policy with trade rules.

Science and technology

The federal S&T strategy, *Science and Technology for the New Century*, recognizes that science and technology are key to achieving sustainable development. The protection and conservation of the environment, while expanding economic prosperity and generating jobs, will require innovation in all sectors of the society. Innovative means are required to make more efficient use of raw materials and energy, create less waste and to develop new and more efficient materials.

Increasing S&T investment in natural resources management, conservation, recycling and alternative products will be required, as will new technologies for the prevention of pollution, restoration of degraded areas, particularly contaminated lands and harbour sediments, preservation of wildlife habitat, and overall integrated ecosystem management.

The federal strategy also identifies the critical role of the social sciences and humanities in providing "models of social innovation that will enable society to adapt to living within ecological limits". The health sciences, in turn, can increase our knowledge of the links between the health of the environment and human well-being.

The four natural resources departments (AAFC, DOE, DFO, and NRCan) signed a Memorandum of Understanding in January 1995 to foster collaboration and coordination in S&T for sustainable development. They are jointly implementing a Framework for Sustainable Development S&T in the natural resources sector by increasing cooperation and working together on specific projects. In the first year there were six working groups: metals in the environment, renewable energy technologies, climate change and variability, coastal zone management, ecosystem effects of UV-B radiation, and R&D priority setting. The first annual report will be issued at the end of August.

Rapid change is and will be one of the defining contextual attributes for science, planning and management situations (for an early discussion of rapid change, see Alvin Toffler's *Future Shock*, 1971). Two key implications are the importance of uncertainty, and the need for adaptive approaches.

An application of an adaptive approach may be found in Volkman and McConah *Through a Glass, Darkly; Columbia River salmon, the Endangered Species Act, and Adaptive Management*, Environmental Law, 1993.

□ S&T efforts should focus on issues such as

- an improved understanding of environmental stresses, their links to the domestic and global economy, and how best to mitigate and adapt to them
- improved resource management
- promotion of recycling, alternative products, and energy and resource efficiency
- uncertainty and risk, including application of the precautionary principle
- how to help industry identify environmentally-driven innovation and technology gaps.

Social linkages

An improved understanding of a wide range of environment-social linkages is key to achieving sustainable development.

Much of the concern about environmental impacts relates to health effects. About 65 percent of Canadians believe that a deteriorating environment has already affected their health. Three issues in particular — toxic substances, air quality and water quality — have in the past 10 years consistently been top environmental concerns (Synergistics, January 1996).

A good deal of evidence exists on environment-health linkages, for example links between smog and respiratory problems, and between ozone depletion and skin cancer. However, there is not a systematic understanding of environment as a determinant of health.

Equity issues have a number of dimensions, including the differential impacts of both environmental and resource stresses and policy measures on different regions of Canada. Developed/developing country relations is an equity issue which requires further work. For example, there is a view among developing countries that the developed world has reneged on its commitments made at Rio. In a similar vein, developing countries see trade and environment as primarily a developed country issue with only potential downsides as far as they are concerned, a view which is severely impeding progress at the WTO towards ensuring trade rules support sustainable development. Another area requiring work is the sustainable development aspects of Official Development Assistance (ODA).

With respect to regional development, an aspect which has received a good deal of attention has been eco-tourism. Nature-based tourism is an important element of the economy in all provinces. In 1991, a total of \$9 billion was spent in Canada on fish and wildlife-related activities. These expenditures contributed over \$5 billion in government revenues from taxes and generated 200,000 jobs. However, there can be conflict between conservation of the natural environment and tourism.

Other linkages which are increasingly receiving attention are between environmental stress and conflict. A key issue is how water and food shortages arising from environmental degradation may, through the interplay of social factors, lead to international or intrastate violence.

The University of Toronto, the American Association for the Advancement of Science, and the Canadian Centre for Global Security have been engaged in a project to define what is known about the links among population growth, renewable resource scarcities, migration and violent conflict. The Royal Society of Canada and the Canadian Global Change Program recently released a document which reviews types of environmentally induced conflict and examples of conflicts involving the environment.

The federal government is also conducting research in this area: DFAIT recently released a report entitled *A View of the Forest: Environmental Stress, Violent Conflict and National Security*. DND has contracted a research project entitled *Environmental Change and Regional Security in Southeast Asia*.

A subject area that is recently receiving considerable attention and that pulls together a number of issues concerning the social dimension of sustainable development is the question of sustainable cities — something which, given population trends, will become of increasing importance.

- ❑ **Considerable research is needed towards a better integration of the social dimension in sustainable development. Research should address, among other issues**
 - a more systematic understanding of environment-health linkages at local, regional, national and global levels
 - how to more closely involve communities and individuals in decisions which affect them
 - how to resolve conflicts over land and resource use
 - what are sustainable levels of eco-tourism?
 - what will be the environmental impact of Canada's changing demographics?
 - how to make our cities sustainable
 - a better understanding of the linkages between environmental stress and conflict
 - how to apply sustainable development principles to ODA
 - a better understanding of the economic, social and psychological forces which change behaviour and values.

Institutional issues

Sustainable development will not be achieved unless our institutions promote it. Institutional issues arise at both the domestic and international level.

Domestically, the key issue is whether our institutions are appropriate for the integration of social, economic and environmental factors. With the exception of the Commissioner for the Environment and Sustainable

Development in the Auditor General's Office, there are no "sustainable development institutions" in the federal government. A "three solitudes" approach has been the predominant one to this time, with policies in the three areas being developed on separate tracks. The result has been the development of somewhat of a somewhat adversarial relationship between policy communities, at least between the economic and the environmental. Whatever the linkages may be between environment and competitiveness, such a relationship is counter-productive, particularly in an era of smaller, more efficient government. Economic, social and environmental objectives are all central to the government's agenda, and time and energy devoted to setting one over the other is time and energy wasted.

The recent amendments to the *Auditor General Act* requiring all departments to prepare sustainable development strategies will help promote integration. It is not clear, however, whether this will be enough.

The Deputy Ministers' Task Force on Managing Horizontal Issues, established in 1995 to examine policy coordination within the federal government, identified the need for greater policy coherence and collaboration among departments. It noted that a collaborative policy community which was sensitive to the potential interdepartmental implications of policy initiatives and that recognized opportunities for developing synergies among departments, could lead to new and innovative solutions to complex issues, and contribute to the development of more integrated policy proposals.

The Task Force found that a key factor in improving policy coordination is the ability of departments to balance their individual accountabilities — to meet the needs of clients, stakeholders and partners — and their collective responsibilities — to serve the broader public interest. In this regard, it recommended that departments increasingly focus on working across institutional or jurisdictional lines in order to develop innovative and integrated policies.

- ❑ **Research should build on the work of the Task Force on Horizontal Issues and examine ways to better integrate economic, social and environmental elements in the government's policy development process.**

To some extent, there is a similar need at the international level. Some international institutions (e.g. WTO, World Bank) have begun the process of integrating environmental considerations into their mandates. Other organizations have not gone as far in integrating other perspectives (e.g. certain international environmental conventions such as Basel in incorporating trade policy concerns).

Perhaps an even greater concern at the international level, however, is that international environmental institutions have not kept pace with international economic institutions and developments. The pace of international environmental diplomacy in recent years has been staggering — roughly 60 international treaties and other agreements in the area of the environment

were adopted between 1985 and 1994 (*UNEP Register*). These include most of the major environmental conventions such as the Montreal Protocol (1987), Basel (1989), Climate Change (1992) and Biodiversity (1992).

Nevertheless, the scope of environmental institutions is not nearly as wide as that of economic institutions; the environmental institutions themselves are not as effective (e.g. the compliance and dispute settlement mechanisms of environmental conventions are much weaker than those of the WTO); and the development of institutions has not kept up with economic developments such as global free trade and globalization in general.

In the context of preparations for the 1995 meeting of G-7 Environment Ministers, the need for a single multilateral body on international environmental and sustainable development issues — a Global Environmental Organization — was considered. Such an organization, as proposed by Daniel Esty (see *The Case for a Global Environmental Organization*, 1994) would provide a forum for collective action on global environmental issues, for sharing experiences in addressing common (but localized) environmental problems, and for addressing competitiveness concerns and the resulting political reluctance to introduce policies which internalize environmental costs.

□ Research is needed on how best to strengthen international environmental institutions in terms of issues such as

- **their integration of economic and social considerations**
- **their compliance and dispute settlement mechanisms, and general environmental effectiveness**
- **whether new institutions are required to keep pace with global economic developments.**

Conclusions

The environmental challenge set out in the first part of this paper is daunting; there seems little question that coping with that challenge will figure prominently on the government's policy agenda in 2005. Moreover, the challenge cannot be met in isolation from other government policy objectives. The task will be to achieve environmental objectives in concert with economic and social objectives — that is, to progress towards sustainable development. The research agenda set out in the paper, and repeated for convenience in the Annex, is intended to facilitate that progress.

Annex

Proposed Research Agenda

Indicators

- ☐ Interdepartmental work underway on indicators, including environmental indicators and the valuation of natural capital, must continue. In particular, research should be undertaken on how best to measure progress towards sustainable development. Work should also address the development of social indicators.
- ☐ Government should develop a capacity to model/scenario-build possible future states of the environment, economy and society.
- ☐ Canada should assist to the extent possible the development of global indicators, both on environmental stresses and on progress towards sustainable development.

Competitiveness linkages

- ☐ Research into environment-competitiveness linkages should be carried out, building incrementally on the review called for by SDCC Deputies. The research should include:
 - an analysis of short-term and long-term effects
 - the determinants of Canada's competitiveness vis-à-vis the U.S., and
 - a consideration of sectoral differences.

The ultimate objective should be to facilitate the development of approaches to environmental management and economic policy which maintain and enhance both the quality of the environment and economic competitiveness.

Environment policy tools

- ☐ Research is required on innovative approaches to environment policy in Canada. It should address
 - how regulations can best be designed to promote innovation and eco-efficiency
 - the appropriate use of voluntary approaches and covenants, and how they may be used in combination with regulations
 - how consumer concern for the environment can best be tapped through initiatives such as eco-labelling and eco-certification
 - the role of liability and insurance in changing corporate and personal behaviour
 - the role of the Polluter Pays Principle in the sustainable use of common property environmental resources
 - why Canada has to date made little use of economic instruments.

Environmental considerations in economic policies

- ❑ Research should continue towards ensuring that the tax system promotes sustainable development.
- ❑ Research should continue towards promoting the mutual compatibility of trade and environment policies. There should be a particular focus on
 - the appropriate environmental response to global free trade and globalization in general, e.g. the role of harmonization, the appropriateness of the NAFTA model
 - how to break down the mistrust between developed and developing countries which is slowing progress on this file
 - how to reconcile the life-cycle focus which characterizes much of environment policy with trade rules.

Science and technology

- ❑ S&T efforts should focus on issues such as
 - an improved understanding of environmental stresses, their links to the domestic and global economy, and how best to mitigate and adapt to them
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 - what are sustainable levels of eco-tourism?
 - what will be the environmental impact of Canada's changing demographics?
 - how to make our cities sustainable
 - a better understanding of the linkages between environmental stress and conflict
 - how to apply sustainable development principles to ODA
 - a better understanding of the economic, social and psychological forces which change behaviour and values.

Institutional issues

- ☐ Research should build on the work of the Task Force on Horizontal Issues and examine ways to better integrate economic, social and environmental elements in the government's policy development process.
- ☐ Research is needed on how best to strengthen international environmental institutions in terms of issues such as
 - their integration of economic and social considerations
 - their compliance and dispute settlement mechanisms, and general environmental effectiveness
 - whether new institutions are required to keep pace with global economic developments.

Bibliography

Canadian Underwriter, *Improving the Climate for Insuring Environmental Risk*. August 1995.

Conference Board of Canada, *The, Lean Green*. Ottawa, 1996.

Esty, Daniel, *The Case for a Global Environmental Organization*. 1994.

Government of Canada, *A Guide to Green Government*. Ottawa, 1995.

Government of Canada, *Amendments to the Auditor General Act*. Ottawa, December, 1995.

Government of Canada, *Canada's Green Plan*. Ottawa, 1990.

Government of Canada, Department of Foreign Affairs and International Trade, *A View of the Forest: Environmental Stress, Violent Conflict and National Security*.

Government of Canada, Environment Canada, *GlobeScan*. Ottawa, 1996.

Government of Canada, *Federal S&T Strategy, Science and Technology for the New Century*. Ottawa, 1996.

Government of Canada, Industry Canada, *Canada in an Integrated North America: Competing with the U.S. while Remaining "Canadians"*. Draft, August 1996.

Government of Canada, *SOE Report*. Ottawa, 1996.

Government of Canada, Standing Committee on Natural Resources, Interim Report - *Streamlining Environmental Regulation for Mining*. Ottawa, December, 1995.

Government of the United Kingdom, *Indicators of Sustainable Development for the United Kingdom*. United Kingdom, 1996.

National Academy of Public Administration, *Setting Priorities, Getting Results*. Report to Congress. Washington, D.C. 1995.

OECD, *Environmental Performance Review of Canada*. 1995

OECD, *Implementation Strategies for Environmental Taxes*. January 1996.

OECD, *Integrating Environment and Economy*. 1996.

OECD, *"Procedural Guidelines" on Integrating Trade and Environment Policies*. 1993.

OECD, *Report to Ministers*. 1995.

OECD, *Summary Report of the Workshop on Environmental Policies and Industrial Competitiveness*. 1993.

Porter, Michael, *Green and Competitive*. Harvard Business Review, 1995.

Resource Futures International, *Ecological Fiscal Reform: a Review of the Issues*. November 1995.

Thomas Homer-Dixon, *The Ingenuity Gap: Can Poor Countries Adapt to Resource Scarcity*. 1995.

Toffler, Alvin, *Future Shock*. 1971

Volkman and McConnah, *Through a Glass, Darkly; Columbia River salmon, the Endangered Species Act, and Adaptive Management*. Environmental Law, 1993.

World Business Council for Sustainable Development, *Eco-efficient Leadership for Improved Economic and Environmental Performance*. 1996.

World Commission on Environment and Development, *Our Common Future*. 1987.

5

The Medium-term Fiscal Environment

Issue and Overview

As the research of the ADM Policy Research Committee is showing, Canada will confront a number of daunting economic and social challenges over the next decade, many of which are inter-related in varied and complex ways.

The fiscal challenge is one of those and, it can be argued, a particularly pernicious one as a high debt burden not only makes many of the other challenges more difficult but it will also dictate the government's ability to address effectively those challenges over the medium-term. As is shown below, high public debt, through its impact on confidence and interest rates, engenders negative economic and social outcomes as it is no tautology that it is through a prosperous economy that a nation can afford first-rate social programs.

While substantial fiscal progress has been made in the last three years, the country's relatively high public debt burden, especially at the federal level, constitutes a very real constraint on the ability of government to be a visible and effective force for change and progress in society.

It will thus be imperative to get to a lower level of debt-to-GDP ratio over time — at issue over the coming years will be the level to be attained and the speed at which that level is reached. These decisions will influence the profile of program spending over time and the ultimate ability of the government to

reduce the burden of taxation. They will also require the clear setting of priorities and perhaps the further reallocation of spending from some areas to others.

This paper attempts to do five things:

- i) demonstrate how a high debt burden engenders negative economic and social outcomes, how it quickly crowds out spending on programs and services, and why it is therefore appropriate to get to a lower debt-to-GDP ratio;
- ii) set out the key factors which drive the dynamics of debt and explain their role in the post WWII build-up of debt;
- iii) present medium-term profiles for the debt-to-GDP ratio under plausible assumptions in respect of those same key factors and the fiscal policy implications of attaining alternative debt-to-GDP ratios;
- iv) highlight the implications for the government's medium-term fiscal manoeuvrability of getting to lower debt-to-GDP levels; and
- v) suggest one practicable fiscal policy trajectory through the medium-term and draw the implications in terms of the nature of the government's activities.

It is imperative at the outset to stress that the purpose is not to propose an optimal target level for the debt-to-GDP ratio. Such a level would be difficult, if not impossible to define, even with reasonable theoretical assumptions, in light of the near impossibility of assessing the capital value of a number of areas of spending, such as education and health care. Suffice it to say, for practical purposes, that the optimal ratio is significantly greater than zero.

The level of debt-to-GDP ratio toward which the government should move then becomes an operational issue. On one hand, it will require judgment as to the level that is most likely to secure the government's fiscal credibility and thereby ensure that interest rates decline on a sustained basis to levels in line with Canada's excellent inflation performance, thereby providing a solid foundation for buoyant economic growth and job creation. Other countries are also moving to redress their public finances and Canada is invariably judged in relation to foreign experience. The U.S., for instance and against whom Canada is often compared in terms of fiscal performance, is targeting a balanced budget by early in the next millennium but is starting from a significantly lower debt burden than Canada (50 per cent on a total government, National Accounts basis versus roughly 70 per cent in Canada).

On the other hand, the level of debt-to-GDP ratio which is reached over the medium term will have practical implications, in terms of:

- ☐ the fiscal policy stance over time; and
- ☐ the degree of fiscal manoeuvrability which will ultimately be created.

The reality is that important trade-offs will be need to be made between fiscal policy decisions in the near term and the government's policy flexibility over the longer term. Rather than the setting of an optimal debt-to-GDP target, it is these practical trade-off decisions over time which will really be crucial.

State of Knowledge

The Historical Evolution of the Debt Burden

It is instructive to begin by reviewing the historical evolution of the debt-to-GDP ratio and the major factors which have contributed to the currently high debt burden. This will set the stage for a discussion of the future prospects for the debt relative to the size of the economy, of options for attaining lower debt burdens and the policy implications which flow from such lower levels.

As a result of the steady string of deficits which the federal government has incurred over the past twenty-five years, the federal public debt has grown rapidly in absolute terms and relative to GDP, to reach three-quarters the size of the economy at the present time as compared to 18.7 per cent in 1974-75. And the federal debt burden is three times as large as that of the aggregate provincial sector, whose debt-to-GDP ratio is on the order of 28 per cent.

On the internationally-comparable National Accounts basis, the total government debt burden in Canada (of which the federal share is by far the largest component) is the second-highest among the G-7 countries (Chart 1), surpassed only by Italy. And our debt burden is significantly greater than in the other major countries. As well, few other countries have experienced as significant an increase in its debt ratio as Canada.

In a little over twenty years, Canada has moved from having a relatively low debt-to-GDP ratio (on an internationally comparable National Accounts basis) to having the second highest debt ratio of the G-7 countries, and significantly higher than the average of major OECD countries (Chart 2).

The Implications of High Debt

There are strong economic efficiency arguments in favour of prudent and disciplined fiscal behaviour and, in particular, against governments incurring persistent deficits and rising debt loads. The same arguments support the case for getting to a lower level of debt once a high debt load has been built up.

A smaller capital stock - a rising debt appropriates private savings which otherwise would have financed private sector investment in physical assets (especially in a relatively closed economy) - this problem is however mitigated to the extent that public sector borrowing is channelled into public capital assets (public borrowing in Canada has to a large extent gone to finance current consumption).

Increased foreign indebtedness - persistent government deficits also lower investment spending by soaking up money that could be used for productive investments. Many investments by Canadian firms now must be financed by borrowing from foreigners. As a result, Canada has the highest external debt-to-GDP ratio in the G-7 (Chart 3).

Reduced growth and real incomes - whether through a smaller capital stock or increased foreign indebtedness, public debt results in a lower standard of living in future years. As a result of our rising foreign debt, more and more of Canadian income must go to foreigners to service Canada's foreign debt. This represents a permanent deterioration in the country's potential standard of living. And it means that non-residents are indirectly exercising greater influence over economic decisions made in Canada.

Inflation risk - as well steadily rising debt is likely to induce a risk premium which reflects the extent of the private sector's expectation that the central bank is likely to monetize government liabilities. As such, high debt loads, through sharply higher interest rates incorporating an inflation risk premium (with rates therefore higher than justified by the rate of inflation), represent a real impediment to economic growth and job creation.

Reduced flexibility for stabilization policy - rising debt levels result in a higher debt servicing burden which is largely a non-discretionary claim on revenues.

These purely economic efficiency arguments against high debt loads are bolstered by the inter-generational equity argument against public debt - borrowing to finance consumption today must inevitably be repaid by future generations which have no voice in current decisions. The accumulation of public debt in Canada has been particularly pernicious in this respect as a large portion has been utilized to finance current consumption rather than the accumulation of capital which would provide benefits to future generations. Moreover, adjusting to the major demographic changes on the horizon early in the next century will pose a considerable challenge, as the number of seniors will grow significantly relative to the number of workers. The additional challenge of coming to grips with the current debt load should not be imposed on future generations as well.

As well, debt cannot continue to cumulate indefinitely since the cost of servicing a rising debt must be financed in future years through either reduced government services and transfers or higher taxes. In other words, the cost of deficit finance, in terms of lower program spending or higher taxation, is not avoided but merely deferred. And the high burden of

taxation that has resulted from past fiscal indiscipline and a high debt load also poses a concrete impediment to private sector initiative, economic growth and job creation.

While debt servicing charges can be financed through higher borrowing for a time, it is nonetheless the case that there is a very definite feasibility constraint on the growth of public debt which is related to the growth in the economy. With real interest rates being set in international capital markets, there quickly arises the problem of, and policy concern with, the stability of the public debt, as has been the case in Canada since 1983. We will return to a discussion of debt dynamics and the vicious cycle of debt accumulation and sustainability below.

The very real implication of living beyond one's means for so many years is that debt charges begin to capture a growing share of one's income, or revenues in the case of the government. Interest charges now eat up some 36 cents of every revenue dollar, as compared to under 22 cents in 1980-81 and roughly 11 cents in 1974-75. More importantly, there also results an increasing crowding-out of the ability of government to provide the programs and services that are needed by Canadians.

With high debt servicing obligations, the fiscal position also becomes extremely sensitive to movements in interest rates. Every 100 basis point increase in rates hikes up the deficit by \$1.3 billion the first year and by \$3.0 billion in year four.

Key Factors in Debt Buildup

Having reviewed the historical evolution of debt, it is instructive to set out the major factors which have contributed to the current relatively high level of debt relative to the size of the economy. This analysis, while appearing complex and tedious, is actually rather simple and straightforward in that it depicts, through very few arithmetic relationships, the small number of economic and policy factors which explain the growth of public debt.

SIMPLE DEBT DYNAMICS

D = Debt

OB = Operating balance

(revenues minus program spending)

$$(1) D_t = (1 + r)D_{t-1} - OB_t$$

$$(2) GDP_t = (1 + g)GDP_{t-1}$$

$$(3) \frac{D_t}{GDP_t} = (1 + r - g) \frac{D_{t-1}}{GDP_{t-1}} - \frac{OB_t}{GDP_t}$$

Equation (1) is essentially the government budget constraint which states that the debt this year will be last year's debt, plus debt charges (which are

determined by the level of debt and interest rates, r), minus the operating surplus (or plus the operating deficit). Equation (2) sets out the time path of GDP, which is simply set by the growth of the economy (g). Finally, by dividing equation (1) by equation (2), it is possible to set out in equation (3) that the debt-to-GDP ratio, or more pertinently its year-to-year change, depends on:

- ☐ the gap between interest rates and the growth rate of the economy; and
- ☐ the operating balance, that is the gap between total revenues and program spending, relative to the size of the economy.

When r exceeds g , as is currently the case, the government must run operating surpluses just to keep the debt burden from rising. And the larger is that gap, the larger must those operating surpluses be as well. For example, if interest rates average 8 per cent and economic growth averages 4 per cent, a debt burden of 75 per cent of GDP can only be stabilized at that level with an operating surplus of 3 per cent of GDP, a level not seen since the early 1950s.

Table 1 sets out the average values of these key debt dynamics factors for certain periods since the mid-1940s. The sub-periods are chosen on the basis of:

- ☐ the magnitude of the change in the debt ratio;
- ☐ the size of the $(r-g)$ gap; and
- ☐ the size of the operating balance that was incurred.

The evolution of the debt burden and of the key driving factors is also displayed in Chart 4.

Four sub-periods are highlighted. Immediately following WWII and through the mid 1950s, the federal government posted significant operating surpluses (averaging 3.6 per cent of GDP) and benefited from large negative gaps between interest rates and the rate of economic growth, i.e. growth exceeded rates of interest by large margins (by 5.3 percentage points on average). This fortuitous nexus of events resulted in sharp declines in the debt-to-GDP ratio, from over 100 per cent at the end of WWII to under 40 per cent in the mid 1950s, a fall of over 60 percentage points in just a decade.

From the mid-1950s to the mid-1970s, operating surpluses were considerably smaller than in the previous period (0.7 per cent of GDP on average), largely reflecting a sharp rise in program spending relative to the size of the economy. The negative gap between interest rates and economic growth was sizeably smaller during this period (1.7 percentage points on average), largely as a result of much higher interest rates. On balance, these factors were mildly favourable in terms of the dynamics of debt and the debt-to-GDP ratio edged down gradually to under 20 per cent in 1974-75, a decline of some 20 percentage points over two decades.

After the mid-1970s, the debt dynamics turned decidedly unfavourable. In the decade between the mid-1970s and the mid-1980s, the federal government ran large operating deficits (averaging 1.9 per cent of GDP), reflecting ongoing high ratios of program spending relative to GDP despite significant declines in the revenue yield, in large measure reflecting the transfer of tax points to the provinces in 1977. During this decade, interest rates rose considerably and, on average, outstripped the rate of economic growth by 3 percentage points. As a result, both key debt dynamics factors were operating in tandem in an unfavourable way and the debt-to-GDP ratio soared from under 20 per cent in 1974-75 to over 54 per cent in 1986-87.

In the period since 1986-87, nominal interest rates have, on average, been lower but the average rate of economic growth has fallen even more. The gap between interest rates and growth has therefore actually risen to 5 percentage points, its highest average sub-period level since the war. While interest rates have been lower in this period, they have nonetheless remained at levels above those which would be justified by Canada's excellent inflation performance in recent years. This highlights the particularly deleterious effects of high debt burdens, which continue to adversely affect inflation expectations and the risk premium demanded by holders of government paper. These two factors serve to keep Canadian real interest rates relatively high, both in absolute terms and relative to those in other major countries with significantly lower debt loads.

Fiscal consolidation efforts in the late-1980s, and especially over the last three years, produced average operating surpluses of 0.8 per cent of GDP from 1987-88 to 1995-96. However, the effect on debt of the interest rate/growth rate differential far outweighed the effect of these operating surpluses, and the debt-to-GDP ratio continued to rise, reaching an estimated 74.2 per cent in 1995-96.

In the 1994, 1995 and 1996 budgets, it was assumed for the sake of prudence that interest rates would continue to exceed economic growth, though by somewhat less than in recent years. It was therefore necessary in those budgets to engineer large and growing operating surpluses, fully 3.2 per cent of GDP in 1996-97 and rising to 4.2 per cent in 1997-98, in order to halt and reverse the growth in the burden of debt — a level of the operating surplus not seen since the late 1940s. With program spending slated to fall further to 12 per cent of GDP in 1998-99, the operating surplus could well approach 5 per cent of GDP in that year and the fall in the debt ratio will gain further momentum.

The actions in the three budgets since 1994 have reversed the dynamics of debt and the debt-to-GDP ratio will begin to decline steadily in 1997-98 and debt charges will finally begin to eat up fewer of federal revenue dollars beginning this year. However, the process will be slow to build up any steam. The fact of the matter is that the burden of debt and debt charges had risen over such a long period and gotten to such onerous levels that the descent to lower levels will take time. Once the process gets going firmly, the dynamics could start working in our favour and the burden of debt charges could well decline at an accelerating rate.

Prospects for the Debt Burden

The discussion of future prospects for the debt ratio kicks off in 1998-99, as the level of program spending has already been set through that year. Beyond that year and over the medium-term horizon through 2004-05, it is possible, on the basis of a small number of assumptions in respect of the major economic and policy factors, to establish a baseline trajectory for the debt-to-GDP ratio.

The average effective interest rate on federal net debt is just over 8 per cent at the present time, implying a real rate in the area of 6.5 per cent. As was suggested above, such levels of interest rates reflect ongoing positive risk premia because of Canada's relatively high debt load and the sluggish adjustment of inflation expectations to our current low levels of inflation. Work at the Bank of Canada suggests that, with the possibility that the behaviour of inflation has changed over time, there can be episodes when inflation expectations may not be consistent with current inflation. Maintaining inflation within the stated target bands should, over time, lead to less uncertainty about future inflation and, as a result, we can expect lower nominal interest rates.

Analytical work undertaken last year for the G-10 Ministers and Deputies supports this general conclusion. For countries with a history of high inflation, lack of credibility increases the inflation premium in nominal interest rates. However, it was also found that, over the last 35 years, there has been a secular increase in "world" real interest rates, on the order of 100 basis points to a current level of 4 per cent, reflecting worldwide secular trends in savings and investment. And among these, the study concluded that the main causal factor has been a decline in savings rates, driven largely by government fiscal deficits, which has far outpaced the reduction in desired investment. And beyond this influence of fiscal policies on real rates, the study also found that countries which pursue imprudent and unsustainable fiscal policies will pay a sizeable risk premium.

These findings suggest that Canada can expect to benefit from significantly lower nominal interest rates over the medium-term. Ongoing success on the inflation front will lower inflation expectations to levels in line with the current rate. Fiscal consolidation will produce lower levels of the debt-to-GDP ratio and lower risk premia on government debt. The risk premium will likely not vanish completely, however, as debt ratios will still remain relatively high through 2005 and political uncertainty may continue to be a factor. As such, for strategic planning purposes, it is plausible to posit that the average effective interest rate on net debt in nominal terms could decline to perhaps the area of 6.5 per cent over the planning horizon.

In terms of medium-term growth prospects, work at the Department of Finance points to a significant decline in the trend rate of potential output growth, to the area of 2 to 2.25 per cent. On the assumption that inflation will average roughly 1.5 per cent per year, one could therefore expect nominal GDP to grow by something on the order of 3.5 per cent a year

through 2005 (on the implicit assumption that the economy has returned to potential as the focus is on structural, medium-term trends in public finances rather than cyclical, short-run influences). As mentioned in the "five-pager" on medium term growth prospects, there are a number of policy areas in which future actions could expand potential growth, including overall levels of taxation and the efficiency of the tax system.

The operating surplus in 1997-98 is projected to be 4.2 per cent of GDP, on the basis of total revenues of 16.8 per cent of GDP and program spending of 12.6 per cent of GDP. The latter is set to fall further to 12 per cent of GDP in 1998-99. If we take as operating, baseline assumptions for present purposes that the revenue yield is maintained over time at 16.8 per cent of GDP and program spending at 12 per cent of GDP, then it is plausible to posit an ongoing operating surplus of 4.8 per cent of GDP per year.

We can then lay out a baseline trajectory for the debt-to-GDP ratio, utilizing the simple arithmetic relationships set out above. By the year 2004-05, with the assumptions above, the debt-to-GDP ratio would decline by almost 20 percentage points from its 1997-98 value, to a level of roughly 54 per cent, broadly in line with its level in the late 1980s. Public debt charges would represent 21 per cent of revenues, down from 36 per cent in 1995-96 and its lowest level since 1980-81.

It is also possible to utilize our simple analytical framework to assess the sensitivity of the baseline scenario to alternative assumptions. In one alternative scenario, we assume that interest rates average 0.5 points lower and economic growth averages 0.5 points higher, producing an (r-g) gap of 2 per cent, as opposed to the baseline assumption of 3 per cent. In another scenario, we assume interest rates 0.5 points higher and growth 0.5 points lower, giving a gap of 4 per cent. The results are displayed in Table 2 and reveal that a 1 percentage point decline (increase) in the (r-g) gap translates in a roughly 5 percentage point decline (increase) in the debt-to-GDP ratio relative to the baseline scenario. Regardless of scenario, however, there still results an appreciable reduction in the debt burden and the burden of debt charges, which highlights the significance, in the dynamics of debt, of maintaining operating surpluses.

Knowledge A Debt Target?

The literature on the optimal ratio of debt-to-GDP is inconclusive. Certain general statements can, however, be made. It is generally agreed that, given the negative effects of high debt loads, in terms of both economic efficiency and intergenerational equity, lower debt-to-GDP ratios are preferable to higher ones. In terms of level, there is also a broad consensus that, over time, public indebtedness should only be incurred to finance public capital/infrastructure. The problem here is in terms of the appropriate definition of public capital — how does one measure some aspects of public capital such as education, training, and even medical care to maintain a healthy workforce?

In light of these considerations and despite the measurement problems just cited, there is also a wide consensus that the current level of the debt-to-GDP ratio is too high, both absolutely and relative to the other major industrialized countries.

Beyond the need to get to debt ratios more in line with other G-7 nations, the appropriate level of debt then becomes an operational issue, measured against desirable levels of other key variables. For instance, the lower the debt ratio that is attained, the greater will be the government's policy flexibility, in terms of its ability in the future to increase program spending or reduce the burden of taxation, as the burden of debt charges will also be correspondingly lower. In setting a debt ratio toward which it wishes to move, the government will need to determine the extent to which it may want to increase spending or reduce taxes over time. And there is a definite time trade-off involved — to the extent that program spending is increased and/or taxes reduced sooner rather than later, then the flexibility to do so later will be constrained. This is so because spending and taxation decisions will affect the time path of the debt ratio and thereby the policy manoeuvrability that will be available.

Conversely, ongoing fiscal discipline in the near term will produce a greater fall in the debt ratio and, over the medium-term, far greater room to act proactively on the spending and taxing sides of the ledger. As well, persistent fiscal discipline will increase the credibility of government fiscal actions and thereby enhance the prospects of durably lower rates of interest through the medium-term. Indeed, action to increase spending and/or reduce taxes which are judged to be premature (i.e. implemented before Canada's debt burden falls into line with that of other major countries) could well backfire and lead to higher rather than lower interest rates. This would not only set the debt dynamics into vicious mode once again but it would also derail prospects for more buoyant economic growth and job creation.

The key issue that will need to be determined, then, is the debt level which the government will want to approach through time. At a minimum, it is suggested that the government may want to pursue the policy assumptions which underpin the baseline scenario above. This would involve maintaining program spending at a maximum of 12 per cent of GDP for several years still and keeping the revenue yield at its current level of just under 17 per cent of GDP. As was shown above, this will produce a sizeable decline in the debt ratio, on the order of 20 percentage points through 2004-05.

And, with an assumed gap between interest rates and the rate of economic growth of 3 percentage points, keeping the debt ratio at that level after it has been attained in 2004-05 would necessitate an ongoing operating surplus of just over 1.5 per cent of GDP, as compared to the level of 4.8 per cent through 2004-05. As such, some 3.3 points of GDP would be freed up to increase program spending and/or reduce taxes in the middle of the next decade. The mix of these two options would, of course, have important implications for competitiveness and the strengthening of potential output growth as the burden of taxation is widely believed to be an important

impediment to private sector initiative and growth. On the spending side, there also arises the issue of public investment and its role in underpinning competitiveness and growth.

Of course, more aggressive action in terms of a lower debt ratio would greatly increase the government's policy flexibility in the future. Getting to lower debt ratios in the year 2004-5 would, however, necessitate operating surpluses that are larger than the 4.8 per cent of GDP that are assumed in the baseline scenario. Table 3 sets out the size of such surpluses that would be required for alternative levels for the debt-to-GDP ratio in 2004-05.

This table highlights clearly the extent of the challenge confronting the federal government if it is to achieve lower debt-to-GDP ratios, both absolutely and in relation to the major OECD countries. The average debt ratio for the latter group is on the order of 45 per cent of GDP on a total government, National Accounts basis. Such a level for Canada would imply a somewhat smaller federal ratio (in the area of 35 per cent on a National Accounts basis, or roughly 45 per cent on a Public Accounts basis) as the provinces account for some one-quarter of the current debt-to-GDP ratio.

Achieving lower debt ratios by 2004-05 would require considerably larger annual operating surpluses between 1999-00 and 2004-05 than are assumed in the baseline scenario. A debt ratio of 45 per cent, for instance, would necessitate operating surpluses of 6.2 per cent of GDP each year, fully 1.4 percentage points higher than in the baseline. Short of further increasing the burden of taxes, this would imply that program spending would need to be further constrained to the area of 10.6 per cent of GDP by 1999-00 and beyond. Needless to say, with the extent of program spending restraint and restructuring that has been achieved since the 1994 budget and given that program spending will already be at its lowest level relative to GDP since 1949-50, getting to lower debt ratios sooner would be a daunting challenge.

As mentioned above, lower debt ratios would eventually provide increased policy flexibility. Table 4 sets out the extent of that flexibility for alternative levels of the debt-to-GDP ratio in 2004-05.

In this exercise, we assume that the gap between interest rates and the rate of economic growth is maintained at 3 percentage points. The table shows that, for each level of the debt ratio, there corresponds a level of the operating balance that is needed to keep the debt ratio stable at that level. We then assume that any room to manoeuvre between that operating balance and the baseline level of 4.8 per cent of GDP is apportioned equally to higher program spending and a lower tax burden. For example, with a debt of 45 per cent of GDP, the operating balance would need to be maintained at 1.35 per cent of GDP to keep the debt-to-GDP ratio stable, implying 3.45 percentage points of GDP that would be available for policy initiatives. In this table, as we assume the equal use of that flexibility on both program spending and lower taxes, it is shown that program spending could rise to 13.7 per cent of GDP (as compared to 12 per cent in the baseline) and the tax burden could fall to 15.1 per cent of GDP (16.8 per cent in the baseline).

The key issue that must be decided in the future is the level of the debt ratio toward which we will move and the speed at which we want to achieve that level. This will require judgement as to the level that is most likely to secure the government's fiscal credibility and thereby ensure that interest rates decline as postulated above, and in line with Canada's relatively favourable inflation performance. As there are no readily available and reliable guides to such a decision, the most appropriate practice is likely to be the setting of ongoing lower debt ratios on a year-to-year basis, which can be secured by maintaining the path of fiscal discipline on which we are now headed. As such, there would appear to be little room to significantly reduce taxes over the near term. As well, spending discipline will need to be maintained to keep the ratio of program spending at a maximum level of 12 per cent of GDP for some time to come. Doing so may well require some difficult decisions and possibly some further reallocations from one area to another, an issue to which we now turn.

Implications for the Size of Government and the Nature of its Activities

The choices that will need to be made as to a debt ratio and the speed at which it is attained will have very real policy and political implications as the government establishes its priorities over the medium-term. A reduced level of visibility for the federal government in the economy will raise the issue of how the senior level of government can best address, in both a visible and effective way, the economic and social challenges which will confront the country over the next decade and beyond.

It is also the case that the provinces have had to deal with serious fiscal imbalances caused in very large measure by structural spending imbalances relative to revenues. While the majority of provinces have been successful in dealing with those challenges (success in Ontario and Québec is projected by the turn of the century), it is the case that the gravity of the fiscal problem is much less serious at the provincial level than it is for the federal government. The aggregate provincial debt burden is one-third that of the federal government and provincial debt charges account for a far smaller share of revenues than is the case for the federal government (at the current provincial debt-to-GDP ratio of 28 per cent, a total provincial operating surplus of roughly 1.2 per cent of GDP is needed to stabilize the provincial debt ratio, as compared to a federal operating surplus of over 3 per cent of GDP required to stabilize the federal debt-to-GDP ratio).

This has meant that provinces have been able to deal with their fiscal problems through much smaller operating surpluses and this, in turn, has meant that provincial program spending has not had to be reduced relative to the size of the economy to the same extent as federal program spending. This as well will have clear repercussions on the visibility and relative influence of the federal government over the medium-term.

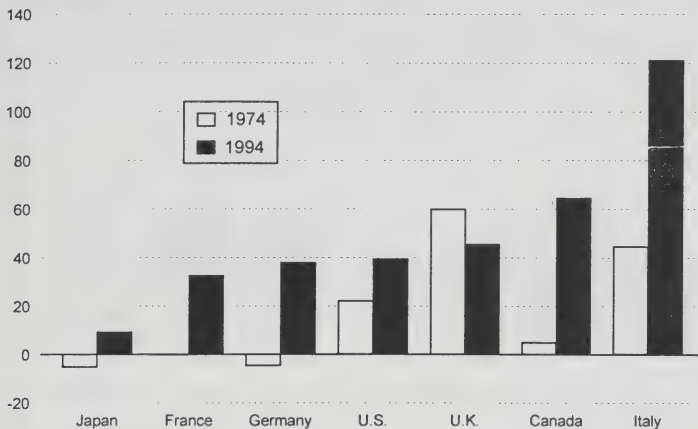
Developing a Vision of the Federal Role and Priorities

The nexus of fiscal prospects and options set out above suggests that it will be crucial for the federal government to focus its programs, services and activities in those areas where it has a clear role and where it can make a visible and effective contribution. Given the fiscal imperative and constraints, this will require the setting out of priorities, not only within the major areas of activity but also across those areas.

Chart 1

Total government net fiscal debt - G7 countries

(National Accounts basis)
per cent of GDP

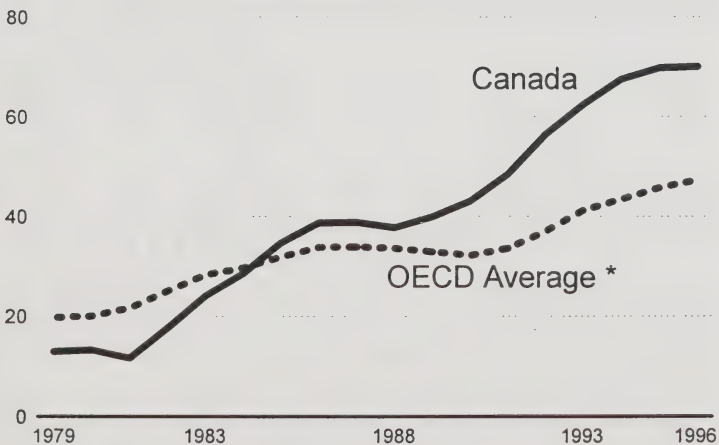


Source: Statistics Canada for Canada. OECD estimates for other countries.

Chart 2

General Government Net Debt

per cent of GDP

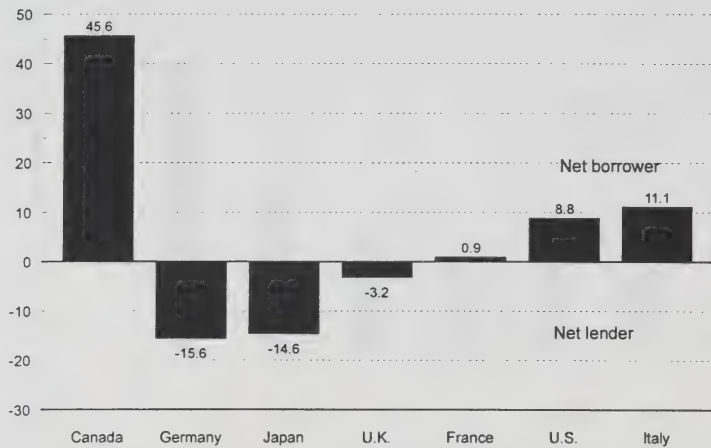


* Weighted average of 17 OECD countries.

Chart 3

G-7 countries' net international investment position

per cent of GDP



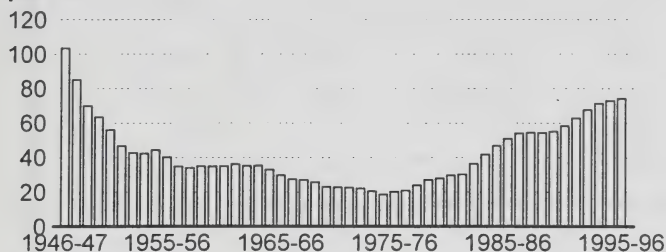
1- 1994 for Canada. 1993 for France, Germany, Japan, the United States and the United Kingdom. 1992 for Italy.

Chart 4

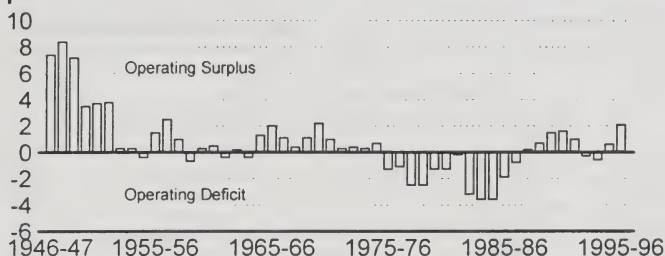
Dynamics of the Federal Debt-to-GDP Ratio in the Postwar Period

Net Federal Debt as a percentage of GDP

per cent

**Operating Balance as a percentage of GDP**

per cent



Effective Rate of Interest minus
Per cent change in nominal GDP
 per cent

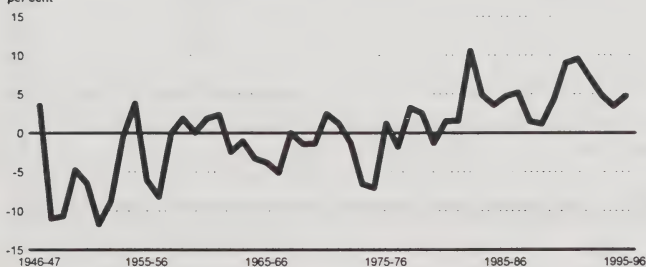


Table 1
Federal Debt Dynamics: Key Factors
 (percentage points — average per period)

	1946-47 to 1955-56	1956-57 to 1974-75	1975-76 to 1986-87	1987-88 to 1995-96
Nominal Interest Rate (average effective rate)	4.1	7.5	13.6	10.0
Nominal GDP Growth	9.4	9.1	10.6	5.0
Interest Rate/Growth Rate Differential	-5.3	-1.7	3.0	5.0
Operating Balance (% of GDP)	3.6	0.7	-1.9	0.8
Change in the Debt-to-GDP ratio (percentage points)	-63.1	-21.7	+35.4	+20.1

Table 2
Alternative Debt Profiles

	Baseline Scenario (r-g) = 3%	Scenario 1 (r-g) = 2%	Scenario 2 (r-g) = 4%
Debt (% of GDP)*	53.9	49.0	59.1
Debt charges (% of revenues)*	21.3	18.1	24.8

*Debt ratio and debt charges ratio that would exist in 2005-05 assuming that program spending and revenues as a share of DGP remain at their levels projected for 1998-99.

Table 3
Annual Operating Surpluses Required to Achieve Alternative Debt Ratios in 2004-05

Debt Ratio in 2004-05(% of GDP) (% of GDP)	Operating Surplus required per year from 1999-2000 to 2004-05 (% of GDP)
50	5.4
45	6.2
40	6.9
35	7.7
30	8.5
25	9.3
20	10.0

Table 4
Debt Ratios and Fiscal Manoeuvrability:
Balanced Expansion of Program Spending and Lower Taxes

Debt Ratio (% of GDP)	Operating Balance (% of GDP)*	Debt Charges (% of revenues)	Program Spending (% of GDP)**	Revenues (% of GDP)***
50	1.5	21.5	13.7	15.2
45	1.35	19.4	13.7	15.1
40	1.2	17.3	13.8	15.0
35	1.05	15.2	13.9	14.9
30	0.9	13.1	14.0	14.9
25	0.75	11.0	14.0	14.8

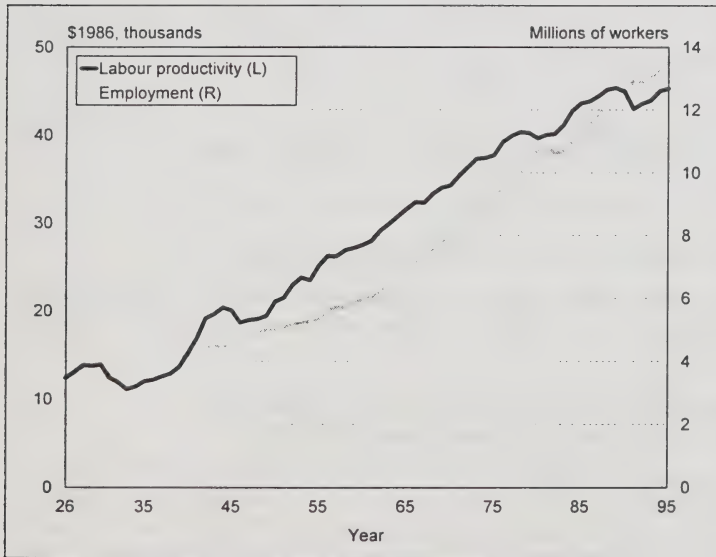
*The operating balance-to-GDP ratio needed to maintain the chosen debt-to-GDP ratio constant at that level, assuming a gap between interest rates and the rate of economic growth of 3 percentage points.

**The ratio of program spending-to-GDP assuming that one-half of the difference between the needed operating balance ratio in column 2 and the baseline level of 4.8 per cent of GDP is dedicated to higher program spending.

***The ratio of revenues-to-GDP assuming that one-half of the difference between the needed operating balance ratio in column 2 and the baseline level of 4.8 per cent of GDP is dedicated to lower taxes.

6

Improving Productivity



Issue

Today, a generation of young Canadians does not expect to do better than their parents. Incomes have been stagnant for several years, joblessness remains at historically high levels, and fewer resources are available to provide social programs and to address concerns such as clean environment, safe streets, adequate public infrastructure and the mediation of social conflicts. Slow economic growth is at

the source of these problems. Failure to operate at capacity and to expand capacity means lost opportunities: lost incomes and jobs, and the prolongation of debts and deficits that threatens the economic and social fabric. The challenge is to achieve a higher and sustainable long-run growth path that holds out the promise of improvements in job prospects and living standards.

State of Knowledge

Labour productivity is the main contributor to real income growth

Real income per capita is closely related to the standard of living of a population. It can be viewed as the product of six contributing factors:

While Canadians enjoy a relatively high standard of living, there has been a marked slowdown in the progression of real income in Canada over the last twenty years. Between 1961 and 1973, real income per capita grew at an average annual rate of 4.2 per cent. Since 1974, growth has proceeded at less than half that rate, or 1.9 per cent on average. The consequence of such a decline in the rate of growth of real income is tremendous. For instance, over a normal working lifetime, say 35 years, an average individual would more than quadruple his or her real annual income when the average annual rate of growth is 4.2 per cent. However, with an average annual rate of growth of 1.9 per cent, real income would not even double over an individual's entire working lifetime. Growth has also become more irregular (as underlined by the last recession) and more unequally shared in the last 20 years (Fortin and Helpman, 1995).

1. The income-output ratio, or the ratio between GNP and GDP. (Canada's national income is less than the value of its domestic product because of the interest and dividends it pays on its large foreign debt.)
2. The terms of trade, or the ratio between the average price of what we sell and what we buy.
3. Labour productivity (GDP per person employed).
4. The employment rate, or the percentage of the labour force which is actually employed.
5. The labour force participation rate, or the percentage of the population aged 15 and over which wants to work.
6. The labour force source population, or the percentage of the total population which is 15 and over.

Table 1 shows that, over the last 30 years, growth in real income per capita of Canadians has been fuelled by three main developments:

- ☐ advances in labour productivity which accounted for about 60 percent of real per capita GDP growth in Canada since 1961;
- ☐ rising labour force participation (mainly of women); and
- ☐ the growth in the labour force source population.

Rising unemployment has been a retarding factor, while the income-output ratio and the terms of trade had a relatively minor influence on real per capita income growth.

Slowdown in economic growth is mainly due to slowdown in labour productivity

Table 1 also shows that growth has slowed down since 1973 because the labour force source population has grown more slowly, and to a smaller extent because of the rise in structural unemployment, but most importantly because of the drop in the annual growth rate of labour productivity. In fact, close to 60 percent of the slowdown in economic growth since 1973 has been due to the slowdown in labour productivity growth.

Dominance of labour productivity will increase

The slowdown in labour productivity growth is worrisome as the dominance of labour productivity in determining income growth will most likely become even stronger in the future. To see why this is, let's examine the potential contribution of other factors to income growth. We can abstract from the income-output ratio and the terms of trade, which had a marginal impact on income growth, and concentrate on the components affecting the outlook for potential GDP growth.

Table 1
Breakdown of the Average Annual Growth Rate of Real National
Income Per Capita into Six Contributing Factors,
Canada, 1961-1973 and 1974-1993
(Percent per year)

Contributing Factor	1961-1973	1974-1993	Change
Income-Output Ratio	0.0	-0.1	-0.1
Terms of Trade	0.1	0.2	+0.1
Labour Productivity	2.4	1.1	-1.3
Employment Rate	-0.1	-0.3	-0.2
Labour Force Participation Rate	0.7	0.6	-0.1
Labour Force Source Population	1.1	0.4	-0.7
Total Growth Rate	4.2	1.9	-2.3

Source: Fortin, Pierre and Elhanan Helpman, "Endogenous Innovation and Growth: Implications For Canada", Industry Canada, Occasional Paper Number 10, August 1995.

Labour force source population will grow more slowly

By 2005, the growth in the overall Canadian population will be around 1 per cent — below the growth in the 1980s, and well below the growth of around 1.75 per cent over the 1960s and early 1970s. This reflects a decline in Canadian fertility rates which is slowing the natural increase in population, and which is not completely offset by high net immigration. Slower population growth will lead to slower labour force source population growth to around 1.25 per cent by 2005, as compared to near two per cent in the mid 1970s when the baby boom generation was hitting labour force age and fuelling strong increases.

The trend participation rate will decline

Poor labour market conditions over the past few years have tended to discourage people from entering the labour force, since they feel there is little hope of finding work. As a result, the current participation rate is below its long-run trend, leaving scope for a rise in participation rates over the next several years as the labour market recovers and discouraged workers re-enter the labour market. The underlying trend participation rate, however, will decline. The sustained, downward pressure on the

participation rate is particularly evident after 2001 as the first of the baby boom generation hits their mid 50s, the age when labour force participation starts to drop off dramatically.

A rise in employment rate will add modestly to growth

Recent changes in the unemployment insurance and social security systems are contributing to reducing the disincentives to employment and should help to lower structural unemployment. However, an increase in the long-run employment rate or a decrease in structural unemployment can add only modestly to potential growth. A decline of a percentage point in the structural unemployment rate spread over a decade would add only a tenth of a percentage point a year to potential employment growth.

To sum up, changes in both the labour force source population and the participation rate will contribute less to GDP growth in the medium-term, and the impact of a reduction in structural employment would not offset the above negative effects. This implies that labour productivity growth will become a still more important determinant of national income growth.

Two concepts of productivity

- Productivity is a measure of the quantity of real output produced per unit of input. *Labour productivity* is the ratio of real output to labour input. It measures the quantity of real output per worker. *Total factor productivity*, or TFP, is the ratio of real output to total factor input. It measures the efficiency with which all inputs are combined in the production process. Labour productivity is the product of TFP and a function of the amount of physical capital (such as machinery and equipment) available per worker

Labour productivity slowdown is due to TFP slowdown

Growth in labour productivity is determined by growth in capital intensity (or the capital-employment ratio) and growth in the efficiency with which inputs are combined in the production process, or total factor productivity (TFP). The observed labour productivity slowdown in Canada after 1973 was not the result of a decline in the rate of capital accumulation: the trend growth rate of capital per worker did not change significantly between the periods 1961-73 and 1974-93; it remained stable at around three per cent per year. The level of capital per worker even increased considerably over the last decade. Rather, the labour productivity slowdown was the result of other developments that have translated into a decline in the

growth rate of TFP.

Canada's productivity record has worsened in absolute and relative terms

Productivity growth in Canada and other industrialized countries declined dramatically in the post-1973 period. In Canada, TFP growth in the commercial sector averaged only 0.2 percent per year in the post-1973 period, compared to a healthy 2.0 percent growth per annum during the 1960-73 period. This slowdown has been pervasive across all Canadian industries and regions (see Economic Council of Canada (1992).

This phenomenon is not unique to Canada, but according to OECD estimates presented in Table 2 the decline has been more pronounced in Canada than in other countries.

"Canada, even more than other major countries, did not share the surge in productivity growth experienced by the United States in the second half of the 1980s. As a result, the productivity shortfall relative to the United States widened significantly, while Canada's productivity advantage vis-à-vis the other major OECD countries diminished".
(OECD Economic Surveys — Canada 1995)

Consequently, Canada has lost considerable ground to other OECD countries in terms of living standards. For instance, Canada's per capita real income (measured in terms of purchasing power parity exchange rates) is currently less than 80 percent of the U.S. level, compared to 85 percent 10 years ago. Other G-7 countries have considerably improved their relative standing vis-à-vis Canada and the United States in the post-war period (Chart 1).

It should be noted that productivity growth can be measured in a variety of ways. The estimates will vary depending on the methodology and data sources utilized¹. The productivity estimates in this paper are from Statistics Canada. For international comparison purpose, however, we have used estimates from the OECD and the Bureau of Labour Statistics. There are differences in the two estimates for Canada. In fact, according to the Statistics Canada estimates TFP growth in the business sector has matched on average that in the U.S. since 1961. Needless to say that this issue would need to be clarified. However, at roughly 0.2 per cent per year (Statistics Canada estimates) Canadian TFP growth in the 80s and 90s remains well below that of G-7 countries other than the U.S.

Table 2
Total Factor Productivity Growth
Business Sector
Percent change at annual rates

	1960-73	1973-79	1979-94*
United States	1.6	-0.4	0.4
Japan	5.6	1.3	1.4
Germany	2.6	1.8	0.5
France	3.7	1.6	1.3
Italy	4.4	2.0	0.9
United Kingdom	2.6	0.6	1.6
Canada	2.0	0.6	-0.1
Big 7	2.9	0.6	0.8

* 1979-93 for Japan, Germany and Italy.

Source: OECD Economic Surveys — Canada 1995

¹ For a comparison of different methodologies and results relative to the measurement of TFP, see Wilkins, Lee and James, 1992.

The U.S.-Canada manufacturing productivity gap has increased

The productivity problem is particularly acute in Canadian manufacturing, the front and centre of international trade and increasingly fierce international competition. During the 1985-91 period, TFP in Canadian manufacturing, on average, declined by 0.8 percent per annum, compared to an average annual growth rate of 1.3 percent during the 1961-85 period. The slowdown was pervasive across all major manufacturing industries.

Our relative position vis-à-vis the U.S. also deteriorated over the same period of time as TFP in U.S. manufacturing increased by a healthy 1.1 percent per year. In particular, the United States outperformed Canada in all 15 major manufacturing industries (Chart 2). As a result, the U.S.-Canada manufacturing labour productivity gap increased by 20 percent in the post-1985 period. In 1995, American manufacturing labour productivity, on average, was 48 percent above the Canadian manufacturing productivity level, the largest gap since 1965. Similarly, Canada lost substantial ground to other G-7 countries during this period (Chart 3).

Service sector productivity growth is particularly weak

Low TFP growth is not a characteristic of manufacturing alone. In fact, service sector TFP growth has consistently lagged behind that of the goods sector for over three decades. For the period 1962 to 1992, TFP growth in the goods sector was more than double that in the service sector — 1.4 per cent per year for goods compared to 0.6 per cent for services. While the differential has narrowed in recent years, this is due to the slowing of goods sector productivity growth, not an increase in service sector productivity growth. However, low TFP growth is not a characteristic of all service industries. Some service industries, notably communications and transportation, have shown strong TFP growth. Both retail and wholesale trade have also recorded good performance. However, two service industries — business services and finance and real estate experienced productivity declines (Table 3).

An important source of the differential in productivity growth between goods and services sectors could be due to measurement errors (Griliches, 1992). It is argued that problems in defining service sector outputs and identifying price versus quality changes, and the paucity of data on services, have resulted in underestimation of service sector output growth. There is also an argument that lagging productivity in services in the 1980s was in part a result of overinvestment in information technology (Roach, 1991). Roach argues that not only did service firms invest too much in new computer technology, but the long learning period associated with the new technology also reduced the visible benefits from these investments. Lack of competition has also been advanced as an explanation for lower productivity growth in the service sector (Roach, 1991). The service sector may be subject to less competition than the goods sector due to a higher level of regulation, including foreign investment controls; and less exposure to foreign trade. Firms may adopt major changes if they are in direct competition with best-

practice firms. Baily (1993) finds that, in general, the U.S. had a relatively high level of productivity compared to the other countries (France, Germany, Japan, and the U.K.), consistent with its generally lower level of regulation. In recent years, however, the degree of competition facing some of the services sectors has been changing, with easing of regulation in many sectors and the lowering of trade barriers. Examples of these sectors include communications and the retail trade sector. New technology and tariff reductions are facilitating trade in services and also increasing the level of competition within the industry.

Recent productivity performance of the resource sector has been on the rise

Within the goods sector, agriculture and natural resource industries recorded good TFP growth from 1982 to 1992 (Table 3). The largest relative gains were recorded in metal and non-metal mines followed by crude petroleum and natural gas. Relative gains were modest in other industries such as logging and forestry, fishing and trapping and agriculture. Construction recorded relatively poor TFP growth.

Table 3
Mean Total Factor Productivity Growth*

Industry	1962-92	1962-71	1972-81	1982-92
Goods	1.4	2.7	1.0	0.4
Agriculture	0.9	1.3	0.5	1.5
Fishing & Trapping	-0.0	-1.2	-1.7	1.6
Logging & Forestry	1.7	1.9	0.7	2.1
Metal Mines (other)	0.4	-2.6	-1.7	4.8
Non-Metal Mines (other)	3.6	7.7	3.3	3.4
Crude Petroleum & Natural Gas	-0.9	2.1	-7.6	2.3
Manufacturing	0.6	1.1	0.7	0.1
Construction	0.3	0.5	0.9	-0.3
Services**	0.6	1.7	0.4	-0.2
Communications	3.6	3.8	4.7	2.5
Transportation***	1.3	2.5	0.6	1.0
Retail Trade	1.1	2.3	0.3	0.7
Wholesale Trade	1.7	2.8	1.3	1.1
Business Services	-0.1	0.1	-0.2	-0.1
Finance and Real Estate	-1.6	-1.4	-1.4	-2.0

*Gross output measures except sector totals.

**Value-added measure, up to 1991 only.

***Not including storage.

Source: Unpublished data from Statistics Canada

Small differences in productivity improvements make a big difference to living standards over time. With 2 percent annual growth in TFP (the rate of growth we witnessed in the 1960s), per capita GDP doubles in about 35 years; and with 0.2 percent annual productivity growth (the rate of growth we experienced over the last 20 years), it takes 347 years.

Poor productivity record at the basis of economic malaise

The productivity slowdown and the relatively weak productivity performance in the post-1974 period have been the root causes of the economic malaise in Canada: weak economic growth, stagnant real incomes, weak profitability, a low Canadian dollar, high unemployment, large government budget deficits, large and rising personal, corporate, government and external debt levels, erosion of the social safety net and rising social tensions, etc. For instance, average real per capita income of Canadians today would have been 44 percent higher (or \$33,600 instead of \$23,400) than without the fall in TFP growth (Chart 4) and around half a million more Canadians would be employed today.

Using the same "Simple Debt Dynamics" model as that used by the Department of Finance in their paper on *The Medium-Term Fiscal Environment*, we calculated the fiscal impact of the productivity slowdown. The results show that had TFP growth remained at 2 per cent per year since 1974 the federal budget would have been in surplus since 1988 and the federal debt would be close to 9 per cent lower today — all of this while maintaining the same level of annual operating expenditures. It should be noted that the above results, based on a simple accounting (non-behavioural) model, underestimate what would have happened in reality. In fact, the higher productivity growth would have led to higher tax revenues and lower interest rates than the values actually observed over the last 20 years and that were used in the calculations. All this to say that the effects of the productivity slowdown are highly significant and that continuation of the weak productivity record of the recent past would further aggravate the serious economic and social problems in Canada today.

The manufacturing productivity problem is particularly worrisome and does not bode well for future trade performance, the Canadian dollar and real incomes. With the deepening of North American economic integration, investment and innovation activities have become increasingly footloose. In order to effectively meet the challenges and fully realize the potential benefits of North American integration, Canada must improve its relative productivity performance vis-à-vis the United States. Otherwise, the living standards of Canadians could suffer a great deal. This issue is addressed in *Canada in an Integrated North America*.

What are the causes of poor productivity performance?

Changes in TFP are influenced by changes in a multitude of factors, some tangible, others less tangible. The causes of the dramatic decline in productivity growth in Canada and other industrialized countries have been studied extensively. The factors most commonly cited in explaining the productivity slowdown in industrialized countries include the decline in labour quality, slower growth in R&D intensity, slowdown in infrastructure spending, lower capacity utilization rates, slower rate of capital

accumulation, reduced importance of the "catch-up" bonus due to the convergence of productivity levels within developed countries, and the increased shift in productive resources from high productivity to low productivity (level) industries. It is very difficult to disentangle the precise contribution of each factor to TFP growth because they interact in complex and dynamic ways. Research findings also suggest that these factors at best explain only about 50 percent of the productivity slowdown. The remaining slowdown could be attributed to adverse changes in other important, albeit not easily quantifiable variables such as the flexibility of use of factor inputs, the adoption of state-of-the-art technologies and organizational practices, the quality of management including human capital management, labour-management relations, the extent of domestic and foreign competition, regulation, etc. Measurement errors could also explain some of the observed productivity slowdown (Economic Council of Canada (1992); Fortin and Helpman (1995); Helliwell (1984); Stuber (1988); Baily and Gordon (1988); OECD Economic Survey of Canada 1996).

So, what factors account for the relatively poor productivity performance in Canada? The research suggests that slower and weaker adjustment to the two energy price shocks and the exchange rate shocks, slower rate of capital accumulation², slower rate of growth in R&D spending, slower rate of adoption of best practice technologies, weaker adjustment to the knowledge-based economy and relatively weak competition in both product and factor markets contributed to the widening of the US-Canada productivity gap (see Economic Council of Canada (1992)). In simple terms, the poor productivity performance of the Canadian economy could be linked to a lack of *adjustment* and *innovation*.

It should be noted that the labour productivity (level) gap between large and small firms widened significantly in the 1980s (see Baldwin (1996)). This phenomenon could have also contributed significantly to the widening of the US-Canada productivity gap, given the relatively greater proportion of small firms in Canada. Recent work (see Baldwin (1996a)) examined whether the productivity slowdown that occurred in the 1980s may be attributed to a basic change in the nature of the competitive process — whether there has been a reduction in the extent to which the turnover process (in which more productive firms gain market share at the expense of the less productive) contributes to productivity growth. It was found that a fundamental change occurred in the nature of restructuring: new smaller firms are not contributing to productivity growth as they once were. While smaller firms may be contributing largely to job growth, the quality of those jobs is not what it once was. The fact that small firms have declined in terms of productivity relative to large firms suggests that the small-firm sector has not been the engine of growth that many people have claimed.

² Capital accumulation was not a contributing factor to the widening of the U.S.- Canada manufacturing productivity gap until 1990. However, it might have played a significant role in the 1990s. In fact, the contribution of capital to manufacturing output growth averaged a negative 0.35 percent per year during the 1991-94 period, compared to 1.3 percent per year during the 1982-90 period.

Factors Contributing to the Productivity Slowdown

The productivity slowdown appears to have been caused by a number of different and independent factors, each small, yet all reinforcing one another.

Changes in the labour market

- Changes in the labour market resulting from a decline in the quality of education or work experience could reduce aggregate productivity growth. A number of studies, however, have suggested that the combined contribution of the changes in education level and the age-sex composition of labour force (which affect experience) accounted for less than 5 per cent of the productivity slowdown in Canada and other OECD countries.

Slower growth in R&D intensity

- Slower growth in the R&D/output ratio would reduce productivity growth by slowing the rate of technical innovation. Nevertheless, according to research findings, the slowdown in R&D spending contributed to less than 5 percent of the decline in trend productivity growth in OECD countries.

Slowdown in infrastructure spending

- Reductions in infrastructure investment by the public sector can reduce productivity. Some earlier studies have suggested that reduced public sector spending on infrastructure contributed significantly to the productivity slowdown. More recently this explanation has been criticized by a number of researchers for three important reasons: spurious correlation between productivity and infrastructure spending, two-way causation between the two variables and omission of other relevant variables from the empirical model.

Lower capacity utilization rates

- Movements in productivity tend to follow the economic cycle, improving with expansion and falling during slumps. High capacity utilization and low unemployment encourage investments in physical and human capital and increase the benefits from scale economies. Some past empirical studies suggest that slower economic growth and the lower capacity utilization rates have contributed considerably (up to 30 percent) to the post-1973 productivity slowdown. But, this explanation has been criticized for two important reasons: the two-way causation between output and productivity; and the prolonged period of the productivity slowdown.

Slowdown in capital accumulation

- Capital is an important determinant of labour productivity and technical progress. However, the research to date indicates that less than 10 percent of the productivity slowdown in OECD countries can be explained by a slowdown in capital formation.

Reduced importance of the "catch-up" bonus

- The convergence theory suggests that the larger the productivity gap between the technological leader and follower, the greater the opportunity for the follower to improve. In principle, some of the productivity slowdown in OECD countries could be attributed to the convergence of productivity levels. However, it is difficult to explain why the "catch-up" bonus disappeared abruptly in all sectors across all OECD countries in the post-1973 period. Disaggregated empirical studies indicate that this factor did not contribute significantly to the productivity slowdown.

Inter-sectoral shifts

- Aggregate productivity growth can be adversely affected when resources move from high productivity goods-producing sector to what appears to be relatively low productivity service industries. Past research findings suggest that up to 15 percent of the observed productivity slowdown in OECD countries could be attributed to resource allocation resulting from the increased importance of their respective service industries.

Sometimes known as the "productivity puzzle" or the "productivity paradox", raised by Nobel laureate Robert Solow, the question that has plagued economists in recent years is:

- The 70s and 80s witnessed a wave of technological change based on powerful new information communication technologies (ICTs). Given this explosion of new technologies, unprecedented in speed and pervasiveness, why was the enormous potential not reaped in terms of productivity gains?

The productivity puzzle

The worrisome slowdown in the growth rate of productivity described above is especially remarkable because it occurred just at the time when powerful new technologies should have been exerting a positive influence. Many explanations have been advanced to account for the productivity puzzle but one of the more convincing ones is failure to adjust. More specifically, adjustment means innovating on all fronts. The potential of new technologies can only be realized through complementary innovations in organizational structures, institutional forms, management strategies,

and human resource development. Thus, the relatively sharper decline in TFP in Canada is one reflection of this country's much slower adjustment response. Symptomatic of this adjustment lag are the R & D and innovation gaps between Canada and her leading economic rivals (Chart 5) —gaps that are compounded by the greater weight of SMEs in the Canadian industrial structure. However, a fundamental aspect of the adjustment process is to develop and apply the complementary "soft" innovations that must accompany the "hard" technologies embodied in machinery and equipment. A principal conclusion of the OECD's Technology/Economy Programme was that failure to adopt organizational innovations and adequately develop human resources prevented the full potential of the new technologies being realized. The next section presents evidence that this has been the case in Canada. Recent research (Gera and Massé, 1996) shows that, as a result, in the period 1986-91 Canada's speed of adjustment was lower than in the first half of the 80s and even a little lower than in the decade of the 70s.

"In the long run, knowledge, especially technological knowledge, is the main source of economic growth and improvement in the quality of life".

The OECD Jobs Strategy— Technology, Productivity and Job Creation, 1996

Solving the Puzzle: the Knowledge-Based Economy

This enormously difficult adjustment task is the necessary condition to undertake the shift to a "techno-economic paradigm" known as the knowledge-based economy (KBE). This new paradigm shift is characterized by falling costs and

rising efficiency in the transmission, retrieval and analysis of information. It involves moving away from simply promoting technology generation and diffusion, towards the management of knowledge. The effective management of knowledge, that is, the organizational capability to create, acquire, accumulate and exploit knowledge, is a key source of competitive advantage in the innovation process. What are the characteristics, challenges & promises of the KBE? How can the adjustment to this new paradigm be accelerated?

On the first question, recent OECD research (Stevens, 1996) yields a number of key findings. Fundamental structural changes mark the evolution of the new economy: the shift in the locus of economic activity from the goods-

producing sector towards services and knowledge- and technology-intensive industries. Output and employment are expanding fastest in high-technology industries, such as computers, electronics and aerospace. In the past decade, the high-technology share of OECD manufacturing production and exports has more than doubled. Knowledge-intensive service sectors, such as education, communications and information, are growing even faster. Investment is thus being directed to high-technology goods and services, particularly information and communications technologies. Computers and related equipment are the fastest-growing component of tangible investment. Equally important are investments in intangible capital such as R&D, intellectual capital, software and technical expertise. Chart 6 dramatically illustrates the extent to which the high-technology share of economic activity has grown in several advanced countries including Canada and how the low-tech share has shrunk.

Above all, in the KBE, innovation depends on knowledge generation and acquisition. R&D is often considered as one of the most important determinants of innovation since it is used to generate knowledge. It has been found that the benefits of R&D spill over to other firms and industries (a private rate of return on R&D is estimated to be at between 20 and 30 per cent while a social rate of return on intersectoral and international R&D is estimated to be around 50 per cent) contributing to total factor productivity growth and that investments in R&D enable firms to adopt advanced technologies faster. However, Canada spends less on R&D (1.5% of GDP) than its foreign counterparts despite its generous R&D tax credit program — this innovation gap is not entirely explained by Canada's industrial structure. At the same time, Canadian businesses' share of R&D is substantially less than its foreign counterparts, with the business sector representing just half of total R&D in Canada compared to two-thirds OECD-wide (see Industry Canada, 1996, *The Implications of Knowledge-Based Growth for Micro-Economic Policies*; Industry Canada Working Paper No.3; OECD, *Technology, Productivity and Job Creation*, 1996).

The diffusion of knowledge is as important for economic performance as the creation of new knowledge. Thus the development of networks including research consortia of firms, and university-industry partnerships, is crucial. Studies indicate that such collaboration pays off. For instance, it has been estimated that the rate of return on R & D is 35 per cent for firms with university links, compared to 13 per cent for firms without such links (Doutriaux and Barker, 1995).

While codified knowledge is the material to be transformed (the "know-what"), tacit knowledge is the tool for handling it (the "know-how"). And as the Secretary-General of the OECD puts it, the most important tacit skill may be the ability to learn continuously and to acquire new skills (Paye, 1995). For individuals this means a commitment to continuous learning, while for firms the challenge is to transform themselves into "learning organizations". Clearly, then, the transition to the KBE brings formidable

adjustment problems but it brings opportunities, too. In Canada the high-knowledge, high-technology sector has had the fastest growth in terms of output and employment (Chart 7) and it creates high-skill, high wage jobs (Lee and Has, 1996; Gera and Massé, 1996).

One answer to the second question posed above —namely, how can the adjustment process be accelerated?— lies in the empirical evidence about innovation at the micro level. Quite simply, individuals and firms that adjust and innovate are the ones that survive and thrive. The evidence shows that firms that are successful are those that are innovative in three principal ways. They adopt and apply new technologies, they are innovative in their human resource management, and they exploit the synergies between the two. This is the subject of the following section.

"Human capital and technology are two faces of the same coin, two inseparable aspects of knowledge accumulation."

*The OECD Jobs Strategy —
Technology, Productivity and Job
Creation, 1996*

The Keys to Performance in the KBE: Technology and Human Capital

A large body of Canadian research attests to the importance of innovation for firm-level performance. The Growing Small and Medium-Sized Enterprises (GSME) survey (Baldwin, Chandler et al., 1994) develops a profile of growing small and medium-sized firms with respect to their strategies and activities in a wide

range of areas —management, marketing, finance, human resources, and innovation. By linking this information to company performance, a profile is provided of the differences between the more- and less-successful.

Research based on this data set (Baldwin, 1996b) demonstrates that the competencies of firms with regard to innovation best serve to discriminate between the more- and the less-successful firms. Successful firms place greater emphasis on their innovation capabilities and devote more effort to activities in these areas. More successful firms are more likely to have an R&D unit and to make expenditures on R&D. The common thread for all industries that emerges from this work is that the ability of a firm to grow relative to its competitors and to increase its profitability reflects policy choices primarily in areas that involve innovation.

Technology adoption is associated with superior performance

Establishments that use advanced manufacturing technologies are found to have gained market share and to be paying higher wages than non-users (Baldwin, Diverty and Sabourin, 1995). The use of advanced manufacturing technologies is associated with higher skilled, higher paid and more productive workers. These results, which are based on tracking the performance of technology-adopting plants over time, are confirmed by another study that is based on results from the 1993 Innovation and Technology survey. Most plant managers that had adopted new advanced technologies reported that their productivity had improved. (Baldwin, Grey and Johnson, 1995). For more than 50% of plants, the adoption of advanced technologies served to improve the quality of products produced (Baldwin, Sabourin and Rafiquzzaman, 1996).

Human resource development is an important complement to innovation

Innovation may be the key to business success but governments that design policies aimed solely at helping companies' science and technology activities may be missing the mark. This is a major conclusion of a study by Baldwin and Johnson (1995a) that demonstrates that the emphasis placed on such human-resource strategies as training is critical to an innovator's success. Innovators are much more likely than non-innovators to emphasize a human-resource policy that develops skilled employees via training programs. Innovators place greater emphasis on the contribution that their workers' skills make to the company's growth and believe that they have a better labour relations climate. When the companies in the GSME survey were broken into four groups, ranked by degree of innovativeness, large differences were found in terms of commitments to training. Over 79 per cent of the most innovative group provided training for their workers, compared to only some 36 per cent of the least innovative group.

The emphasis on training differs across industry sectors (Baldwin and Johnson, 1996a). In firms that make extensive use of machinery and equipment, such as manufacturing firms, innovation primarily involves developing new technologies and production processes. Here, human capital improvement is closely linked with the technological and R&D innovation strategy of the firm. In service industries, knowledge itself is the product and human capital is the dominant form of capital. Consequently, innovation requires improving the knowledge base and the abilities of workers. In the service sector, the human capital strategy *is* the innovation strategy.

In short, this research indicates that innovation, technology and human resource strategies are part of an interactive system (Baldwin, Diverty, and Johnson, 1995) and points to the need to integrate training and technology programs.

Innovative management of human resources pays off

A recent Industry Canada paper (Newton, 1996) presents a wide-ranging review of the theoretical & empirical literature in Canada. It makes a strong case for the existence of links between a combination of HR management practices and various performance measures in "high performance workplaces". Various mixtures of organizational innovations (such as employee involvement in decision-making, job redesign, etc.), innovative HR practices (such as pay-for-knowledge, team-work) & TQM have positive effects on such performance outcomes as productivity, costs, customer satisfaction, quality, labour relations etc. (Chart 8).

However, available evidence suggests that most firms are not innovative with respect to HR management practices. A critical measure of the strategic role played by the HR function within firms is the extent to which HR planning and evaluation are integrated into overall business planning. Results from the 1993 Human Resource Practices Survey indicate that in a large sample of Canadian establishments there was either no HR plan

(26%) or the HR plan was not integrated into overall corporate strategy (25%). Furthermore, when firms were clustered into groups according to their use of innovative HR practices fully 70% were "traditional" in their approach.

This is disturbing because observations of the emerging KBE clearly shows that skill needs are rising. Canadian census data show that the skills of the employed work force—not only educational attainment and years of experience, but also measures such as cognitive complexity and task diversity—have risen steadily over the period 1971-81-91 (Chart 9). Recent survey evidence shows that the introduction of computer-based technologies by Canadian firms leads to greater concentrations of employees in high-skilled occupations.

But our management skills are deficient

A recent Industry Canada study (Newton, 1995) cites evidence from several surveys pointing to deficiencies in management skill development—deficiencies that are particularly apparent in the case of SMEs. This is disturbing because Baldwin's 1994 study of growing SMEs identifies management skills as the most important factor contributing to growth. Doubts remain: the latest Global Competiveness Report (1996) ranks Canada a passable 8th out of 49 countries on the overall competitiveness index, but a mediocre 13th position on the management criterion and a lacklustre 21st on the sub-category of entrepreneurship.

What Policy-Makers Need to Know

Sectors of traditional strength in the Canadian economy—such as agriculture and natural resources including mining, forestry and fisheries—continue to make a substantial contribution to GDP. And certainly investments in "traditional" transportation infrastructure such as roads, bridges and ports will be a major prerequisite for growth. Thus, major questions for policy-makers will be how the more traditional wealth-creating activities are, themselves, adapting and innovating, and what accounts for differences in sectoral performances. But, increasingly, the emphasis will be on the newer sources of wealth-generation and specifically on the creation, diffusion and effective application of the knowledge and information which feed them. In addressing growth related policy issues policy-makers will need information about fundamental determinants of growth, such as:

- ☐ **the prospects for labour force growth and potential output.** What role will be played by ageing and by immigration? In the medium-term, what are the levers available to close the output gap?
- ☐ **what determines a competitive business climate for Canada.** What are the impediments to growth? How can they be removed? How can framework policies be improved to foster competitiveness and growth?

- ❑ **the macro-micro linkages.** Is the current low inflation rate in Canada allowing for the relative wage adjustment needed to accommodate structural changes across industrial sectors or is this impeded by nominal wage rigidities? What will be the impact of the reduction in the federal debt on real interest rates and the cost of capital to firms? Are deficient adjustments and/or lack of policies at the micro level impacting on the length and amplitude of the aggregate business cycle and thereby contributing to the persistence of unemployment?
- ❑ **policy sequencing.** Is there an optimal policy sequence that would maximize growth potential and reduce the gap between actual and potential economic performances? Would the payoffs of past structural reforms such as FTA/NAFTA, corporate, personal and sales tax reforms have been higher had these reforms been preceded by labour market and social programs reforms designed to increase adaptability of the workforce to major structural changes?

And, in addition, policy-makers will need to know how the process of adjustment to the KBE can be facilitated:

- ❑ **how to develop a culture of continuous learning** among individuals, firms, and institutions. What is the most effective manner in which the government can change people's attitudes so that learning is a lifetime vocation and one that must be pursued not just through formal education?
- ❑ **how to increase the pace of innovation.** How can investment in R&D be increased and the pace of technological and organizational change accelerated? What are the "economic foundations" to attract knowledge-based industry investment in Canada? Alternatively, what are the relative benefits of shifting our industrial structure towards high-tech industries, matching our competitors, versus capitalizing on our natural resources advantage by complementing them with innovative production processes in the resource sector?
- ❑ **how to facilitate diffusion of knowledge.** What forms of arrangements between industry and university are most effective in the commercialization of academic research? What are the promises of industrial clusters and "smart cities"?
- ❑ **how to effectively manage knowledge.** How can government encourage the adoption of high-performance-workplaces to manage knowledge and knowledge workers more effectively?
- ❑ **how to increase employment through the diffusion and application of ICTS.** How can the government help to minimize the negative impact on employment in some sectors as a result of transition costs and learning effects? How to encourage the development of new industries such as biotechnology and new types of employment?

- ☐ **how to ensure universal access to the Information Highway.** What measures should the government take to ensure universal access to the Information Highway so that every Canadian will be able to take advantage of new opportunities?

Research Framework

A major research priority will be to examine the determinants of long-run potential output growth, including the prospects for the labour force, investment, and, most importantly, the components of TFP. The major thrust must concentrate on the issues of innovation and adjustment, as these are central to the TFP problem. In order to design effective policies that will foster income and employment growth, we will first need to understand what are the impediments to structural adjustment, the adoption of best practices and the diffusion of innovation and knowledge. Following are some of the issues that would deserve research attention.³

The Labour Force and Potential Output

In assessing the medium and longer-term growth outlook it will be necessary to have a good understanding of:

- ☐ the extent to which the recent decline in labour force participation is cyclical or structural;
- ☐ the role of an ageing population in future trends in labour force participation;
- ☐ the growing importance of immigration in growth in the Canadian population and its implications for labour force participation and labour productivity;
- ☐ how the structural and policy changes of the last several years will affect the evolution of structural unemployment in Canada, particularly the speed with which structural unemployment could decline;
- ☐ why the growth process has become more irregular, as evidenced by the last recession.

Investment

Another major determinant of potential output growth and productivity is the rate of capital investment. We need to know more about:

- ☐ how does the cost of capital influence the investment location decisions of firms? Industry Canada research findings suggest that the cost of capital and the cost of equity are significantly higher in Canada than in the United States. Is the higher cost of capital in Canada relative to the United States a significant determinant of the lower rate of capital accumulation in Canada? What are the causes of the relatively higher cost of equity in Canada?

³ The Annex lists a series of papers commissioned by Industry Canada that address several issues related to improving economic growth in Canada.

- ☐ the interrelationships among investments in plant, machinery and equipment, R&D and intangible assets including intellectual capital;
- ☐ the availability of financing for new firms and its impact on their growth prospects;
- ☐ why do Canadian firms invest less in R&D? Despite the most generous R&D incentives to business, the R&D gap remains large and is widening. Why? Is it because of Canada's disadvantage in research clusters and agglomeration economies? Or is it because more and more R&D is done at the MNE headquarters?

The role of SMEs

What accounts for the widening of the productivity gap between large and small firms in Canada in the 1980s? How well do the widening of differences in outward orientation, capital accumulation, innovation gap and human capital explain the widening productivity gap? Are similar relative productivity trends observed in the United States?

Adjusting to the KBE

To survive and prosper in the KBE requires fundamental adjustments by individuals, firms, the learning system and a myriad of governmental, social, financial and legal institutions. Research is required to examine the nature and pace of adjustment to structural change and to identify and access the impediments to such adjustment. Issues include:

- ☐ **individual responses:** analysis of the factors that impact on the ability of people to adapt rapidly to new economic and work environment. What are the incentives and disincentives to adopt a culture of continuous learning and upgrading of skills among the Canadian labour force?
- ☐ **corporate responses:** analysis of the expected corporate response to increased international competition, trade liberalization, rapid technological changes and the information revolution. What are the prospects for a continued trend of restructuring and downsizing as firms adopt more labour displacing technologies? What are the effects on domestic production of the growth of strategic alliances and networks, international business developments, the globalization of multinational activities, the growth of stateless corporations, information networks and electronic communications and other dominant factors which will shape corporate behaviour and organizational models of the future?
- ☐ **education services:** analysis of the performance of the Canadian education system in preparing young Canadians to working life (the school-to-work transition); analysis of the effectiveness of retraining programs.

- ❑ **institutional responses:** analysis of the likely evolution of institutions in the medium term. Examination of framework policies (competition policy, regulatory environment, trade policy, tax policy, intellectual property), Canada's financial system and financial environment, labour organizations of the future, and social assistance institutions (unemployment insurance, public pensions, welfare, etc.). Questions would include the optimal scope and length of IPR protection to stimulate investment and innovation; the impact of changes to Canada's tax structure vis-à-vis the United States, in particular the personal income tax structure, on brain drain from Canada and on Canada's relative productivity performance; the cost of different or duplicative regulatory requirements and associated compliance procedures within Canada as well as between Canada and its major trading partners.
- ❑ **infrastructure for the 21st century:** analysis of the infrastructure requirements for Canada in the next century, including physical (such as transportation), technological and informational. What new types of information and communication infrastructure must be developed to ensure efficient knowledge distribution?
- ❑ **national systems of innovation:** analysis of the components of national systems of innovation including the roles of universities and research institutions, the R & D activities of firms and individuals, domestic and international research consortia, ICT infrastructure and marketplace structure and framework policies. What are exemplary models of institutional arrangements to maximize the effectiveness of collaborative research, development, and commercialization and diffusion of innovation?

The "big picture" — the periodic stock-taking of the overall economic health of the country — masks the complex, dynamic and incessant process of underlying change. It is the birth, growth and death of firms, the enormous flows of individuals through the labour market and learning institutions, the constant process of innovation, adaptation, and reskilling, that ultimately determines the aggregate numbers. And while the broad macroeconomic policy bases, and marketplace climate are clearly essential, it is to the micro level that we must increasingly turn for fresh insights into productivity performance in the KBE.

Innovation Strategies at the Level of the Firm

For the enhancement of productivity, growth and jobs, it is ultimately to the innovativeness of individuals and firms that one must look. The links between innovation and firm performance have been clearly demonstrated. It is clear, moreover, that there are important complementarities and synergies among a range of innovative strategies including technology adoption, organizational

innovation and innovations in human resource management and development. Further work is needed to understand the dynamics of these "bundles " of innovative strategies and their links to bottom-line outcomes. In particular, it is important to understand why many firms and individuals have *not* adopted innovative approaches: what are the barriers and impediments to the diffusion of exemplary practices? Some of the issues that should be addressed include the following:

- ☐ What is the role of entrepreneurship in the dynamics of innovation? What is the relationship between the characteristics of the entrepreneur, innovation and performance?
- ☐ What are the critical factors affecting the decision to adopt (or not) particular innovation strategies? What are the impediments to adoption and diffusion?
- ☐ What are the characteristics of "learning organizations"?
- ☐ What is the role for government in using strategic information products and services to assist firms (especially SMEs) to undertake diagnoses of HR management needs, identify best practices and undertake benchmarking? What is the scope for promoting partnership between business and the school system at various levels to fill particular needs and to promote the development of intellectual capital in learning organizations?
- ☐ What are the critical "intervening variables" that lie between the adoption of policies and practices and their translation into positive performance outcomes? (simply announcing a policy or program doesn't mean it will work: how do you get "buy-in", motivation, and commitment?)

Measures and Indicators

The analysis of the growth process will be facilitated by improved data and measurement techniques, starting with the measurement of productivity.

Many existing analyses on innovation are based on the manufacturing sector. We have very little understanding of the service sector which accounts for two-thirds of the economy. In order to understand the innovation process in Canada, it is crucial to understand how the service sector creates, acquires and distributes knowledge.

An important component of the future research on growth in the KBE must be the development of knowledge indicators. Our understanding of what is happening in the KBE is constrained by the extent and quality of current indicators. New indicators are needed that capture the innovation process and the distribution of knowledge among key actors and institutions in society. This implies measuring "national systems of innovation". The recent OECD (1996) study entitled *"The Knowledge-Based Economy"* proposes the development of indicators on knowledge stocks and flow, particularly relating to the diffusion of information technologies; on social and private rates of return to knowledge investment; on the functioning of knowledge networks and national innovation systems; and on the development and skilling of human capital.

The Question of Balance

Restoring productivity growth in order to improve wealth and living standards is a crucial goal. But economic well-being depends not only on the size of the pie but also on how it is acquired and how it is distributed. The headlong pursuit of growth may incur unacceptable “externalities” such as environmental damage. Moreover, high and rising income per capita may mask significant inequalities by income class, disparities across regions, age, sex, and ethnic groups, and intergenerational inequities. Research required to inform policy development on these issues should focus on the following topics:

- ☐ environmental challenges: analysis of natural resource use in the context of economic growth, sustainable development, environmental degradation, and the appropriate role for government;
- ☐ impacts of technological change on the skill needs of the employed labour force;
- ☐ trends and prospects in the impact of structural change and growth on income polarization.

Other papers in the context of this exercise deal at greater length with these issues.

Conclusion

The slowdown in TFP growth has been the root cause of the economic and social malaise in Canada since 1973. Canada's productivity record has been the worst among the G-7 countries. The productivity problem is particularly acute in manufacturing, the front and centre of intense international competition. In order to effectively manage the challenges arising from deeper North American integration and to realize the potential benefits of increased commercial linkages, it is imperative that Canada improve its relative productivity performance soon. Policies which facilitate and encourage human capital development, workplace innovation, R&D spending, capital accumulation, internal and international diffusion of technologies and knowledge, and the efficient allocation of productive resources would enhance innovation and improve significantly the economic and social outlook for Canada. In order to develop these policies, one must first acquire a better knowledge of the behaviour of firms and individuals in the face of changes coming from the emerging knowledge-based and increasingly globalized economy.

Annex

Industry Canada Research in Progress

The Micro-Economic Policy Analysis Branch of Industry Canada commissioned the following papers which will shed additional light on many of the important issues and challenges of improving economic growth in Canada:

Interindustry and international R&D spillovers: the case of Canadian Industries, J. I. Bernstein, Carleton University.

This paper will compare domestic industry R&D spillovers to international interindustry spillovers and examine the impact of both domestic and international interindustry spillovers on productivity growth for Canadian industries.

Innovation Strategies (CIRANO)

This paper will assess existing innovation policies in Canada and discuss the mechanisms which foster innovation in Canadian firms.

R&D Incentives and Innovation (CIRANO)

This document will analyse tax incentives for R&D and discuss the role of government in promoting research in Canada.

Infrastructure for the 21st Century, Chris DeBresson, Associate Professor in Management and Economics of Technical Change, Université du Québec à Montreal.

The purpose of this paper is to undertake a comprehensive analysis of the infrastructure requirements for Canada in the 21st century. It will take a broad view of infrastructure including physical, informational and technological infrastructure, human resources, and health care, legal system and financial intermediation. It will also discuss possible scenarios for financing future infrastructure needs.

Economic Performance of Canada's Information Sector, Hadj Benyakia.

Using input-output data, this research paper will provide an analysis of the employment and GDP impacts of the knowledge-based sector of the Canadian economy.

Information Society and the APEC, Ron Hirshhorn.

This study will provide an overview of the importance of the information society, investments in new information technologies by APEC member economies, their exposure to foreign technology, and their ability to adopt and use new information technologies efficiently and effectively.

Export performance and Job Creation, CIRANO.

A study of the relationship between export performance and job creation in the case of SMEs by analyzing other countries SME export promotion program and identifying successful SME strategies.

Ecology as a Factor in Innovation and Competitiveness, CIRANO.

This paper will evaluate the environmental efforts of Canadian manufacturers and assess the impact of these efforts on competitiveness.

Technology and Human Resources, Julian R. Betts, Assistant Professor of Economics, University of California, San Diego.

This paper will examine the impact of the (expected) continuing rapid changes in technology on employment, productivity, skill requirements, wage distribution and workplace organization. The paper will propose policy responses for youth and older workers training. It will also identify the role of education institutions.

Responding to the Challenges: Corporate Response, Randall K. Morck, Stephen A. Jarislowsky Distinguished Professor of Finance, University of Alberta.

The purpose of this paper is to provide an analysis of the expected corporate response to increased international competition, trade liberalization, rapid technological changes and the information revolution. The paper will examine the continued trend of restructuring and downsizing as firms adopt more labour displacing technologies, the growth of strategic alliances and networks, expected international business developments, the globalization of multinational activities, the growth of stateless corporations, human resource developments in response to the changing nature of labour organizations, information networks and electronic communications and other dominant factors which will shape corporate behaviour and organizational models of the future.

Responding to the Challenges: Institutional Response, Ronald Daniels, Associate Professor of Law and Director of the International Business and Trade Law Programme and Dean, University of Toronto.

The objective of this paper is to undertake a comprehensive analysis of the likely evolution of institutions in the medium term and to examine what factors these institutions need to consider. Consideration will be given to framework policies (competition policy, regulatory environment, trade policy, tax policy, intellectual property), Canada's financial system and financial environment, labour organizations of the future, the evolving role of the education and training system, and social assistance institutions (unemployment insurance, public pensions, welfare, etc.)

Investment Challenges in Capital, Ronald Giammarino, University of British Columbia.

The purpose of this paper is to examine the future capital investment needs of Canada (by level, types, sectors and regions), and the adequacy of Canadian savings to meet the investment requirements. It will also examine the possible role of foreign borrowing and foreign direct investment in meeting the investment needs in Canada.

Environmental Challenges, Brian Copeland, University of British Columbia.

The paper will first review the developments with regard to the use of natural resources and income distribution over the last 25 years in Canada and worldwide. Next, it will speculate over the likely developments in these two areas and their influence on economic growth, sustainable development, environmental degradation and income inequalities and likely government responses to these developments over the next quarter century.

Developing an Effective Innovation Policy, R.G. Lipsey et al.

The study will provide an approach to assessing innovation policy and to determine why some policies work and others fail. The paper will examine both successful and unsuccessful innovation programs from Canada and around the world relate these to micro-economic theory of technological changes and previously established empirical generalizations about technical changes.

Restructuring and Economic Performance, S. Magun.

Using firm level financial data and survey information, this study will first examine the extent and nature of restructuring in Canada over the last 10 years. Next, it will analyse the short to medium term impact of restructuring and re-engineering on firm performance in terms of sales, productivity, employment, wages and profitability. It will also examine the policy implications of the research findings.

Strategic Alliances by Canadian Companies, S. Magun.

The purpose of this working paper is to use financial data and survey information on 100 Canadian firms to explore the motivations for strategic alliances among companies in Canada and between Canadian and foreign companies, and to analyze their impact on firm performance. The research findings will be used to develop effective policies for facilitating and promoting the participation of Canadian firms in business alliances in Canada and abroad.

Investment Strategies of Canadian Firms, T. Chudy, G. McDougall and D. Swimmer, Industry Canada.

Using financial data and survey information, this research paper will analyze the investment patterns of medium to large-sized firms in Canada, and examine the interrelationship between investment in plant, machinery and equipment, R&D and human resources. The findings of the paper will be helpful in designing effective innovation and investment policies.

Capital Market Issues, forthcoming Industry Canada Research Volume, General Editor: Paul Halpern, University of Toronto.

In collaboration with the Financial Research Foundation of Canada, fifteen interrelated papers are commissioned for examining various capital market issues in Canada. The research agenda addresses a number of timely financing issues confronting small business in Canada,

problems facing high-tech firms and financing problems facing large firms. In addition, the research examines venture capital financing and provides an assessment of several recent financing initiatives. Key papers are being used for the small business agenda, the department's work and submissions to Finance on the review of financial institutions legislation and internal review of labour sponsored venture capital.

Selected References

The following Industry Canada publications were consulted in preparing this paper:

A Quantitative Assessment of High-Knowledge Industries versus Low-Knowledge Industries, Frank Lee and Handan Has, in Howitt, Peter (ed.) op.cit.

Changing Canadian Industrial Structure: Shifts in Output Growth, Surendra Gera and Kurt Mang, Industry Canada, 1995

Employment Performance in the Knowledge Based Economy, Surendra Gera and Philippe Massé, Industry Canada/HRDC Working Paper, (forthcoming).

Endogenous Innovation and Growth: Implications for Canada, Pierre Fortin and Elhanan Helpman, Université du Québec à Montréal and the Canadian Institute for Advanced Research, and Tel Aviv University and the Canadian Institute for Advanced Research, under contract to Industry Canada, 1995.

Foreign Direct Investment and APEC Economic Integration, Ashfaq Ahmad, Someshwar Rao and Colleen Barnes, Micro-Economic Policy Analysis, Industry Canada, 1996.

Foreign Investment, Technology and Economic Growth, Donald McFetridge ed., Industry Canada Research Series, 1991.

Infrastructure and Competitiveness, in collaboration with the John Deutsch Institute, Jack Mintz and Ross S. Preston eds., 1994.

International R&D Spillovers Between Industries in Canada and the United States, Jeffrey I. Bernstein, Carleton University and the National Bureau of Economic Research, under contract to Industry Canada, 1994.

Management Skill Development in Canada, Keith Newton, Industry Canada Occasional Paper n° 13, 1995.

Science and Technology: Perspectives for Public Policy, Donald McFetridge, Carleton University, under contract to Industry Canada, 1995.

Technology and the Economy: A Review of Some Critical Relationships, Michael Gibbons, University of Sussex, under contract to Industry Canada, 1995.

The Human Factor in Firms' Performance: Management Strategies for Productivity and Competitiveness, Keith Newton, Industry Canada Occasional Paper (forthcoming).

The Implications of Knowledge-Based Growth for Micro-Economic Policies, Peter Howitt ed., Industry Canada Research Series, 1996.

The University-Industry Relationship in Science & Technology, Margaret Barker and Jerome Doutriaux, Industry Canada Occasional Paper no. 11, 1995.

Publications by Other Sources:

Abromowitz, M. "Catching Up, Forging Ahead and Falling Behind." *Journal of Economic History*, 1987 46 (2).

Baily, M.N. "Competition, Regulation, and Efficiency in Service Industries", *Brookings Papers: Microeconomics* 2, 1993, pp 307-358.

Baily, M.N. and R.J. Gordon. "The Productivity Slowdown, Measurement Issues and the Explosion of Computer Power." *Brookings Papers on Economic Activity*, 1988 2.

Baldwin, John. 1996b. "Innovation: The Key to Success in Small Firms", in J. de la Mothe and G. Paquette (eds.) *Evolutionary Economics and the New International Political Economy*. London: Pinter.

Baldwin, John, William Chandler, Can Le, and Tom Papailiadis. 1994. *Strategies for Success: A Profile of Growing Small and Medium-Sized Enterprises in Canada*. Catalogue 61-523R. Ottawa: Statistics Canada.

Baldwin, John, Brent Diverty, and David Sabourin. 1995. *Technology Use and Industrial Transformation: Empirical Perspectives*. Research Paper No. 75. Analytical Studies Branch. Ottawa: Statistics Canada. Also published in T. Courchene (ed.) *Technology, Information, and Public Policy*. John Deutsch Institute for the Study of Economic Policy. Kingston, Ontario:

Baldwin, John, Tara Grey, and Joanne Johnson. 1996. *Technology Use, Training, and Plant-Specific Knowledge in Manufacturing Establishments*. Research Paper No. 86. Analytical Studies Branch. Ottawa: Statistics Canada.

Baldwin, John, and Joanne Johnson. 1996a. "Human Capital Development and Innovation: A Sectoral Analysis", in Peter Howitt (ed.) *The Implications of Knowledge-Based Growth for Micro-Economic Policies*. Calgary: University of Calgary Press.

Baldwin, J.R. "Productivity Growth, Plant Turnover and Restructuring in the Canadian Manufacturing Sector." Mimeo 1995, Statistics Canada.

Baldwin, J.R. and D. Sabourin. "Technology Adoption in Canadian Manufacturing." Catalogue 88-512. Ottawa: Statistics Canada.

Economic Council of Canada. *Pulling Together: Productivity, Trade, and Innovation*. Ottawa: Supply and Services, 1992

Griliches, Zvi (ed), *Output Measurement in the Service Sectors*, Chicago, The University of Chicago Press, 1992.

Helliwell, J.F. "Stagflation and Productivity Declines in Canada, 1974-82." *Canadian Journal of Economics*, 1984, 17 (2).

Jorgenson, D.W. "Energy Prices and Productivity Growth." Harvard University, Cambridge, mimeo, 1980.

Meijl, H.V. *Endogenous Technical Change: The Case of Information Technology*.

Maastricht : University of Maastricht, 1995. .

OECD. *OECD Economic Surveys — Canada 1995*.

OECD. *The OECD Jobs Strategy — Technology, Productivity and Job Creation*, 1996

Paye, Jean-Claude "Policies for a Knowledge-Based Economy", *OECD Economic Observer*, July 1996.

Rao, S. P. and T. Lemprière. *Canada's Productivity Performance*. Economic Council of Canada, 1992.

Roach, S.S. "Services Under Siege - The Restructuring Imperative" , Harvard Business Review, September-October, 1991, pp. 82-91.

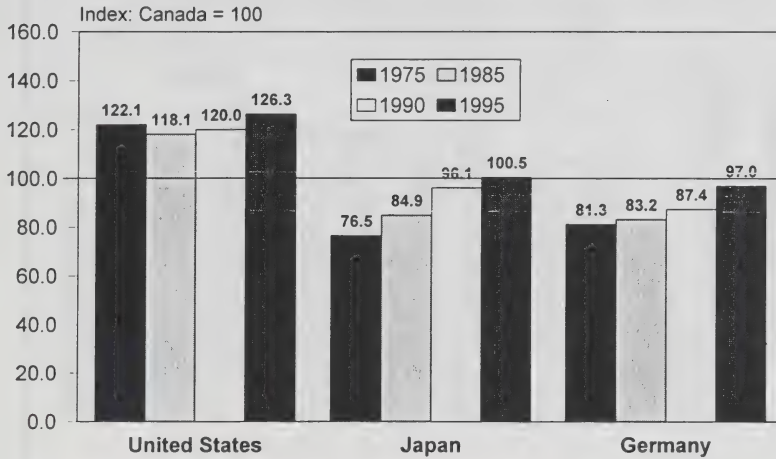
Sharpe A. "The Causes of Productivity Slowdown in Canada." Department of Finance, Ottawa, mimeo, 1982.

Stevens, Candice "The Knowledge-Driven Economy", *OECD Economic Observer*, July 1996.

Stuber, G. "The Slowdown in Productivity Growth in the 1975-83 Period: A Survey of Possible Explanations." Technical Report No. 43, 1988. Bank of Canada, Ottawa.

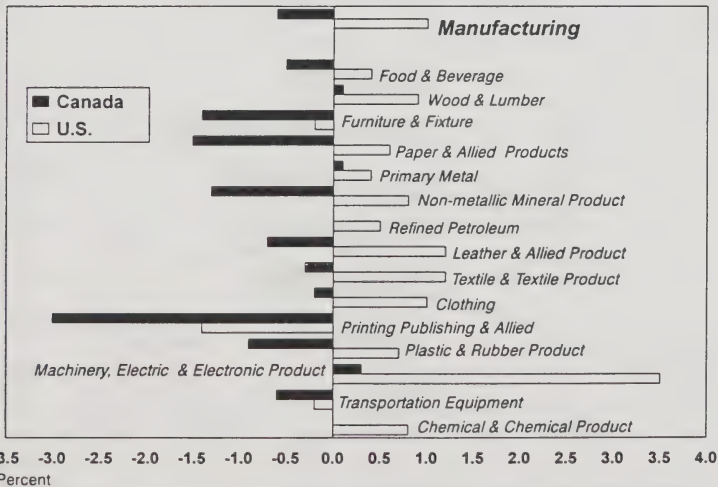
Wilkins, Carolyn, Frank Lee and Steven James. "Estimating Trend Total Factor Productivity Growth in Canada", Working Paper No. 92-03. Department of Finance.

Chart 1
Level of GDP Per Capita*
Canada, U.S. and Selected Industrialized Countries



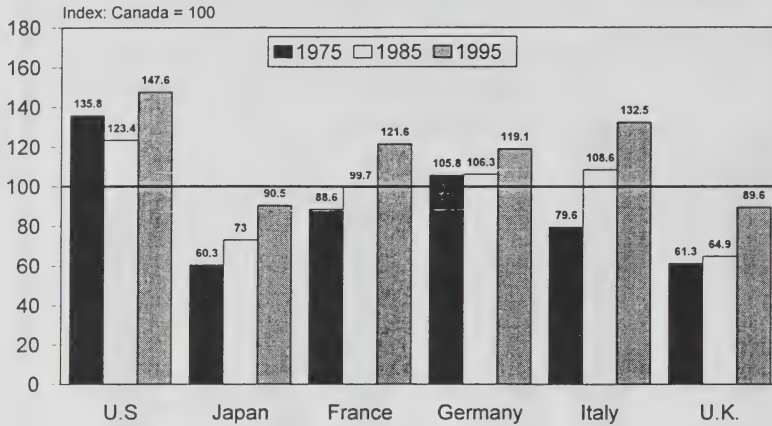
* Using current prices and current purchasing power parity exchange rates
Source: Industry Canada compilations using OECD data.

Chart 2
Total Factor Productivity Growth in Manufacturing Industries,
Canada and the United States, 1985-1992



Source: Industry Canada compilations using data from Statistics Canada.

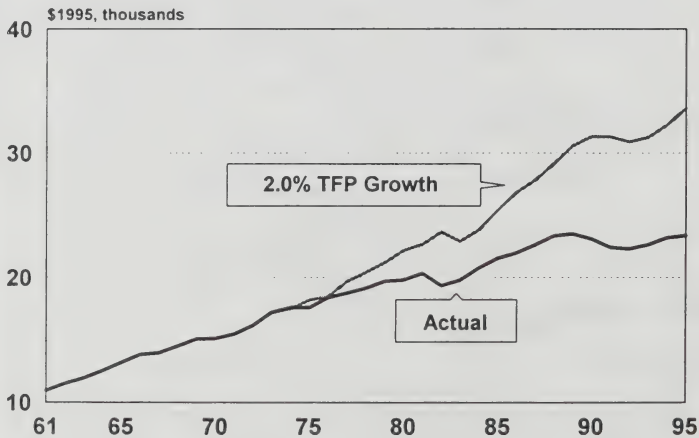
Chart 3
Manufacturing Labour Productivity Levels*, G-7
Based on Purchasing Power Parity Exchange Rates



* Output per Person-Hour

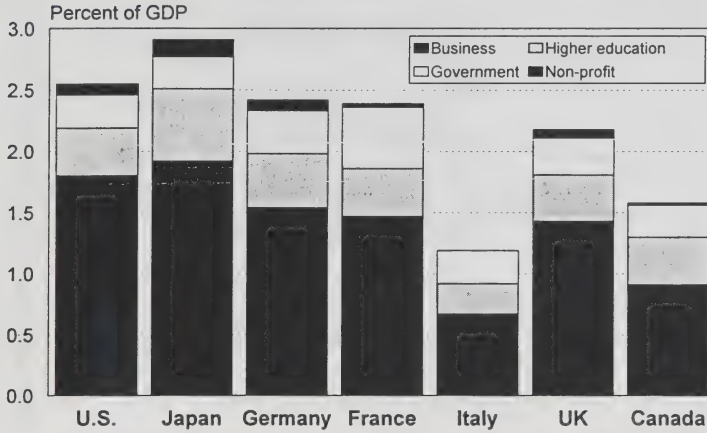
Source: Based on data from U.S. Bureau of Labour Statistics

Chart 4
The Impact of Sustained TFP Growth on
Real Per Capita GDP, Canada



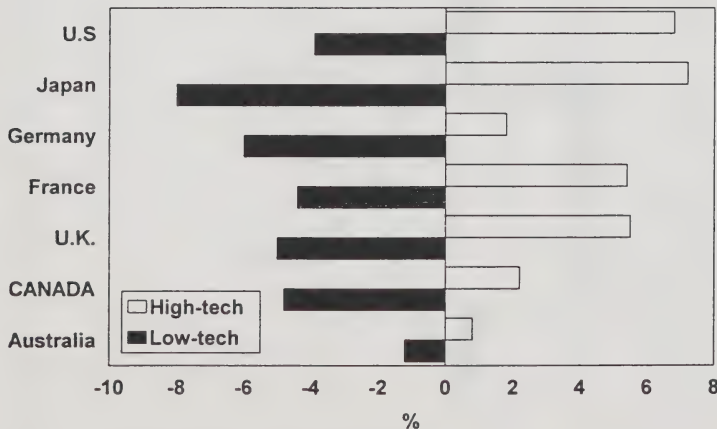
Source: Industry Canada compilations using data from Statistics Canada.

Chart 5
International Comparison of R&D Expenditure
by Sector of Performance, 1994



Source: OECD, Main Science and Technology Indicators, 1996(1)

Chart 6
Changes in Output Share by
Level of technology: 1970-90



Source: OECD Economic Surveys Canada 1995

Chart 7
Employment Growth by Knowledge Intensity, 1990-95

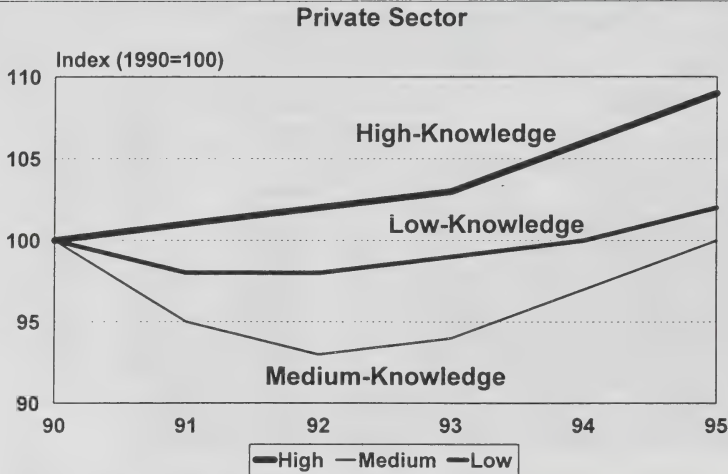


Chart 8
The High Performance Workplace

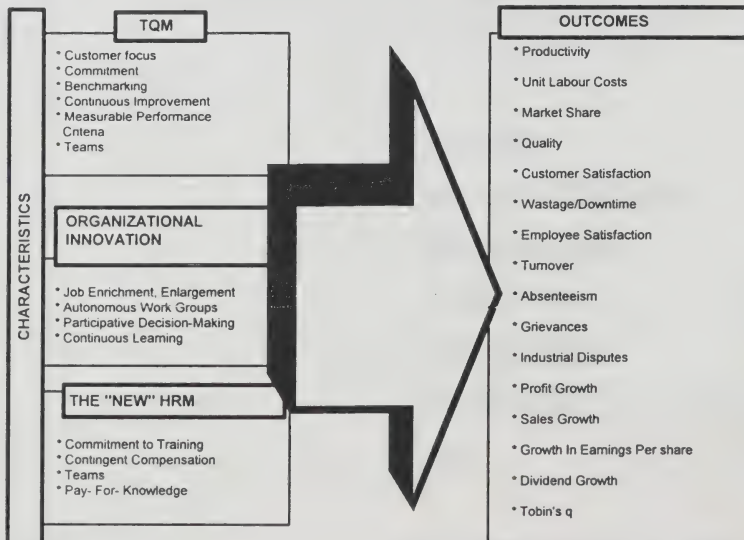
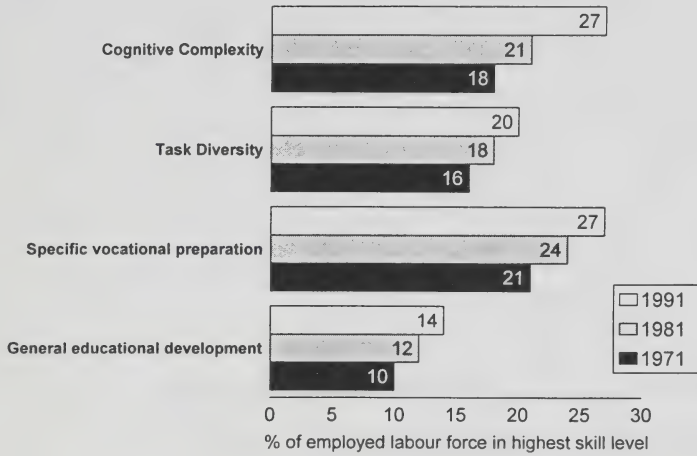


Chart 9
Trends in Skill requirements



Source: Ekos Research Associates Inc. based on Census of Canada, Employed Labour Force

7

The Canadian Labour Market

Introduction

There is a growing perception that the nature of jobs and employment in industrialized nations has shifted in fundamental and profound ways in response to technological change, globalization, and demographic trends. Canada is no exception: the redefinition of the world of work and the transformation of the workplace is an important source of insecurity and apprehension for Canadian workers. Persistently high unemployment rates, the rise of non-standard forms of employment, repeated media reports on business downsizing have all led to concerns about the disappearance of "good jobs" that offer job security and high wages.

The impact of technological change, particularly that associated with the rapid diffusion of new information and communication technologies, appears by and large to be the major source of uncertainty regarding future labour market prospects. For some, the labour-saving potential of new technologies and the requirements for new skills they create will lead to a new era of unemployment for large segments of the labour force, to a polarized society with knowledge workers, on one hand, reaping the benefits of growth and productivity and low skilled workers, on the other, being excluded from the labour market. For others, technological change and the information revolution hold the promise of increased employment and better living standards for all, if employers and workers are willing to adapt and change.

Are current changes in the world of work truly long-term trends? Are they inevitable or malleable to government policy? A major challenge for

labour market analysts is to sort out the changes that are mainly temporary and attributable to the weakness of the economy from those that are essentially structural in nature and bound to persist. This is where any prognostic about mid-term labour market developments has to start.

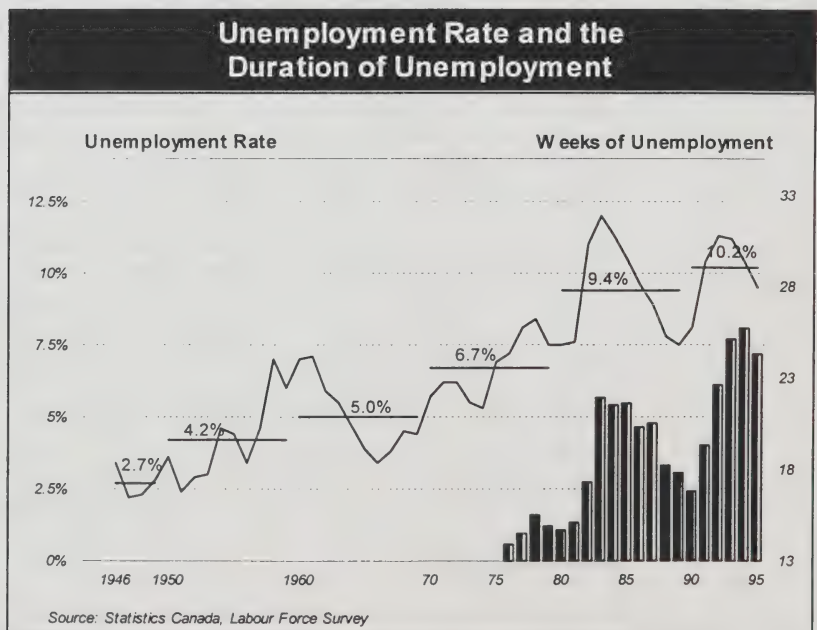
The purpose of this paper is to review the state of knowledge on recent labour market developments. The first section examines some of the recent characteristics of the changing job market. Section two examines the consequences of those changes by focusing on labour market outcomes. The third section looks ahead to the year 2005. The last part of the paper identifies knowledge gaps and discusses ongoing and proposed research projects to fill those gaps.

The Changing Job Market

Qualitative evidence from public opinion surveys and focus groups in recent years has shown a growing pessimism and insecurity about labour market prospects especially for youth. There is the view that there are no stable long term jobs available anymore and even university graduates are unable to find appropriate employment. These perceptions are fuelled by reports on record high unemployment rates, failure of the economy to generate a sufficient number of jobs and on the growing instability of jobs due to workplace transformation. But what are the facts?

Increased unemployment

The last three decades have witnessed substantial increases in the unemployment rate, from 5.0 per cent in the 1960s, to 6.7 per cent in the



1970s, 9.4 per cent in the 1980s and 10.2 per cent thus far in the 1990s. Most of this increase has been due to an increase in the duration of unemployment rather than a rise in its incidence (Sharpe, 1996). The average duration of unemployment increased to over 22 weeks during the 1990s - a significant increase from the 12 weeks experienced during the second half of the 1970s and the 18 weeks experienced in the 1980s.

For over thirty years, the adverse social and economic impacts of rising levels of unemployment were largely mitigated by a significant trend growth in both employment and labour force participation. Thus far in the 1990s, however, unemployment rates have continued to rise while participation rates have declined significantly. Between 1990 and 1995, the overall participation rate of Canadians has declined by 2.5 percentage points. While this decline has occurred in every group, it has been more severe among men, youth, older workers and the poorly educated.

Weak employment growth

The growth rate of employment in Canada has slowed significantly from the high levels recorded in the 1960s and 70s. While employment grew at an annual rate of around 3 per cent in the 60s and 70s and 2 per cent in the 80s, it has grown only by 0.5 per cent per year since the beginning of the 1990s. This development is not unique to Canada - most other industrialized countries have also experienced slower employment growth rates in the first half of the 1990s.

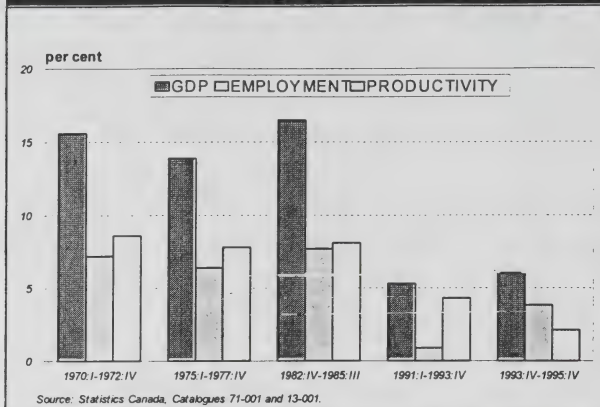
Annual Employment Growth Rates: Canada and Selected Countries

	1960-65	1965-70	1970-75	1975-80	1980-85	1985-90	1990-95*
Canada	2.8	2.9	3.2	2.9	0.9	2.3	0.5
US	1.6	2.1	1.8	3	1.5	1.9	1.4
Japan	1.3	1.5	0.5	1.2	1	1.5	0.9
Germany	0.5	-0.1	-0.4	0.7	-0.4	1.4	0.0
France	0.5	0.8	0.5	0.4	-0.2	0.8	-0.6
UK	0.8	-0.4	0.2	0.1	-0.5	1.8	-1.5
Average	1.2	1.1	1.0	1.4	0.4	1.6	0.0
OECD Total	NA	NA	0.9	1.4	0.7	1.6	0.6

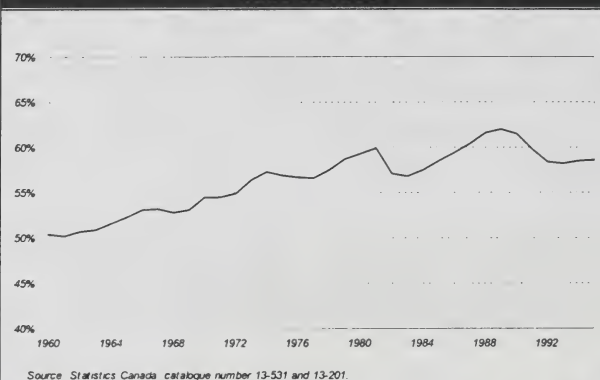
Source: Calculations based on OECD Economic Outlook June, 1995 and OECD Labour Force Statistics, 1994

* Note: Employment Growth for Japan, France and the UK is for the period 1990-94; and for Germany, 1991-94.

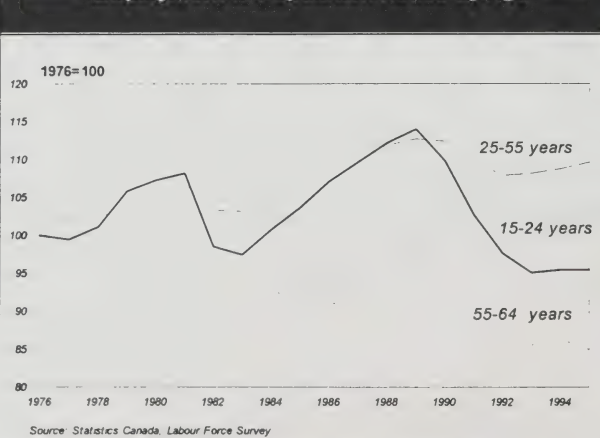
Employment, GDP and Productivity Growth During Recoveries



Employment to Population Ratio 1960 to 1995



Employment to Population Ratios by Age



The expression "jobless recovery" has been coined to describe the poor employment performance since the last recession. Unlike previous recoveries, where a 1 per cent increase in output led on average to a 0.5 per cent increase in employment, during the 1991-93 recovery, a 1 per cent increase in output led to an increase of only 0.17 per cent in employment. Research indicates that while the growth of real wages had contributed to the weakness in employment growth during early 1990s, this weakness was mostly due to the unusually weak recovery in output rather than a fundamental change in the ability of the Canadian economy to generate jobs (Cosier and Mang, 1993; Massé, 1995).

Although the notion of a "jobless recovery" faded somewhat in 1994 as both output and employment growth resumed at a rapid pace, weak output and employment growth returned in 1995.

The poor employment performance of the 1990s has cast a shadow on an otherwise healthy long-term trend increase in Canada's employment to population ratio. Between 1960 and 1995, the employment-population ratio increased from about 50 per cent to about 59 per cent. However, employment rates have not evolved uniformly among the different segments of the population. Employment growth has been strongest for prime-age workers, particularly women. On the other hand, levels of youth employment are

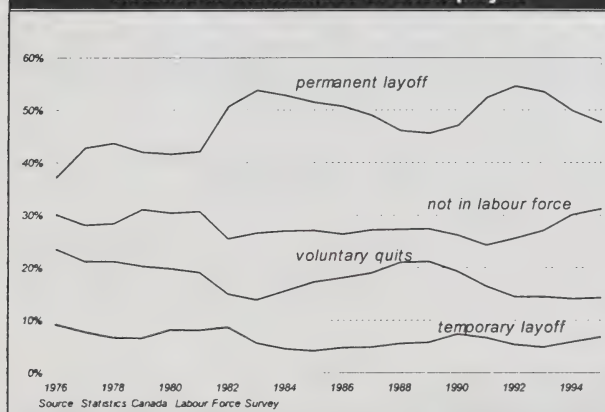
still below pre-recession peaks and there has been a trend decline in the employment to population ratio of older male workers. In addition, those with the lowest levels of education have had consistently decreasing employment rates.

Growing instability

While both high unemployment rates and the "jobless recovery" have contributed to more labour market insecurity, there is also evidence that jobs themselves have become less secure.

Involuntary job losers have become a larger proportion of the unemployed. The proportion of the unemployed that have been permanently laid off has increased from an average of 38 per cent per year in 1976 to almost 48% in 1995.

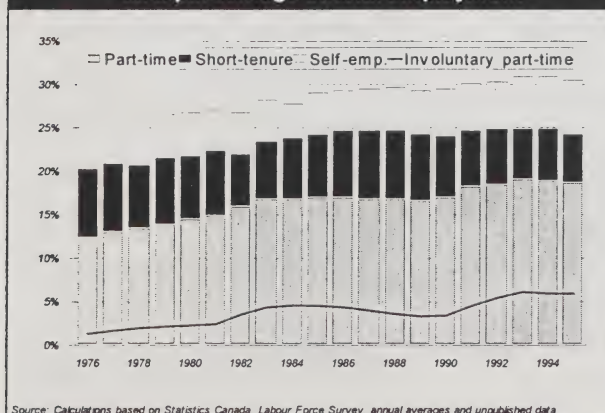
**Activity Prior to Unemployment
Relative to the Number of Unemployed**



In addition, despite the fact that overall, average tenure remains unchanged, the proportion of jobs lasting less than 6 months has increased significantly over the last fifteen years - from 46 per cent of all jobs over the 1981-85 period to 54 per cent over the 1991-94 period.

According to the 1995 Work Arrangements Survey more than 1 in 10 persons stated their job was not permanent. Those in non-permanent jobs tended to be young, female and single. These jobs were less well-paid and came with less benefits.

**Nonstandard Employment, Canada, 1976 to 1995
as a percentage of total employment**



Non-standard employment has become a "leading indicator" for commentators on changes in the nature of employment. Non-standard employment - usually defined as part-time (voluntary and involuntary), short-tenured employment and self employment - has gradually increased from 25 per cent of jobs to 30 per cent over the last 20 years. By far the largest proportion of non-standard employment, and the fastest growth has been in part-time employment. While most

persons working part-time chose to do so, an increasing proportion are working part-time involuntarily - from 10 per cent of part-timers in 1976 to just over 30 per cent in 1995. Moreover,

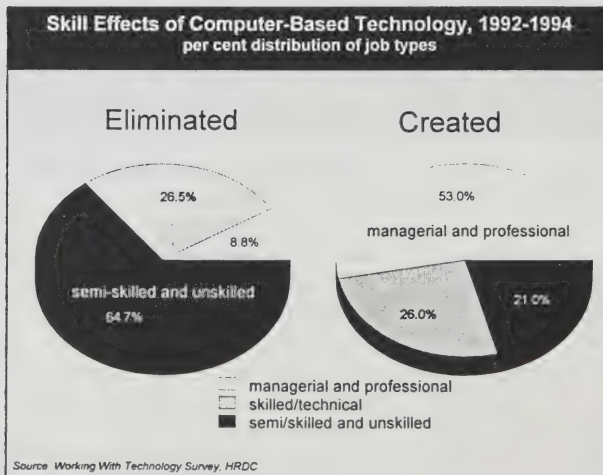
more involuntary part-timers work multiple jobs than do voluntary part-timers, indicating that working multiple jobs is increasingly based on economic necessity.

Average Job Gain and Job Loss Rates Between Consecutive Years, 1978-1992 Total Commercial Economy

Firm Size (Employees)	Job Gain Job Gain Rate	Job Loss Rate	Net Job Change Rate
0 - 19	23.4	-20.2	3.3
20 - 49	15.9	-14.2	1.7
50 - 99	14.4	-13.0	1.4
100 - 499	12.2	-11.2	1.0
500+	6.8	-6.6	0.1
Total Economy	13.4	-12.1	1.3

Source: G. Picot, J. Baldwin, R. Dupuy *Have Small Firms Created a Disproportionate Share of New Jobs in Canada? A Reassessment of the Facts*. Statistics Canada, Analytical Studies Branch, Working Paper Series, No. 71.

Increased instability is also associated with the increased importance of small firms. While small firms have contributed the most to employment growth and now account for a larger share of total employment, their employment creation record masks high turnover rates as reflected in large job gains and job losses (Picot, Baldwin and Dupuy, 1994). In addition to being more unstable, jobs in small firms usually pay lower wages and offer less benefits than those in larger firms (Morissette, 1992).



Changing skills requirements add another source of instability. Technological change, particularly changes resulting from the introduction of new information technologies, has created requirements for new skills across a broad spectrum of jobs. For example, the Working With Technology Survey III, an HRDC sponsored survey on the impact of computer-based technology (CBT) on the workplace, found that most jobs created as a result of the introduction of CBT were high-skilled jobs while most of the jobs eliminated were low-skilled

jobs (McMullen, 1996). In addition, the survey found that all occupational groups experienced an increase in the skill requirements of their job as a result of the introduction of CBT, with the low-skilled occupational groups registering the largest increases. Other Canadian and international firm-level studies have found similar results (Baldwin and Da Pont, 1996; Baldwin, Gray and Johnson, 1995; OECD, 1996a).

In addition to technological change, shifts in work organization away from hierarchical structures and changes in industrial organization in favour of smaller firms also impose new skills sets, such as an increased emphasis on team-work and problem-solving. Management reforms such as Total Quality Management have also influenced the types of skill sets required in the emerging economy. Communication skills are of increasing importance. Workers who lack the prerequisite basic skills, including the ability to learn new technology quickly, run the risk of being excluded from the high growth and high quality job market.

The increase in the demand for high skilled workers is revealed by changes in the share of white-collar workers in total employment. The share of white-collar workers increased from 53.4 per cent in 1971 to 68.3 per cent in 1995, while the share of blue-collar workers fell from 46.6 to 31.7 per cent over the same period. Most of the increase in the share of white-collar employment was due to a rise in the share of white-collar high-skilled jobs (management, scientific occupations, professionals, technicians and supervisors). This phenomenon appears to be widespread, occurring within industrial sectors, and not merely the result of employment shifting towards industries that tend to employ more white-collar workers (Gera and Massé, 1996, OECD, 1996a).

The Occupational Distribution of Employment

Occupational Group*	1971	1981	1991	1995
White-Collar	53.4	60.3	67.6	68.3
Blue-Collar	46.6	39.7	32.4	31.7
White-Collar High-Skilled	24.0	27.0	33.0	33.1
White-Collar Low-Skilled	29.5	33.3	34.6	35.2
Blue-Collar High-Skilled	15.3	13.1	10.2	9.6
Blue-Collar Low-Skilled	31.3	26.6	22.2	22.1

*White-collar high-skilled occupations include upper-level managers, middle and other managers, professionals, technicians and associate professionals, supervisors; White-collar low-skilled occupations include clerical, sales and services workers; Blue-collar high-skilled occupations include foremen/women, skilled craft and trade workers; and Blue-collar low-skilled occupations include semi-skilled and manual workers, other manual workers.

Note: Shares exclude employment in postal services, religious services and public administration.

Source: Gera and Massé (1996). Authors' calculations based on data from the Canadian Occupational Projection System.

Labour Market Outcomes

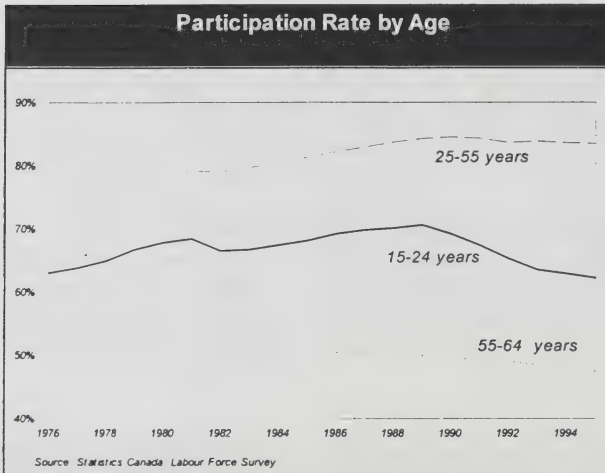
While much of Canadians' increased insecurity about employment prospects reflect a perception that there are fewer job opportunities than before, increased insecurity has also arisen from the fact that the opportunities that do exist have not been shared by all workers. In particular, employment and earnings prospects of youth and low-educated workers have deteriorated relative to more experienced and more highly educated workers.

Participation outcomes

The rise in unemployment in Canada during the 1990s has been concentrated among the least educated and most vulnerable workers. For example, the unemployment rate of older workers almost doubled over the

last 20 years, from 4.2 per cent in 1976 to 8.2 per cent in 1995.

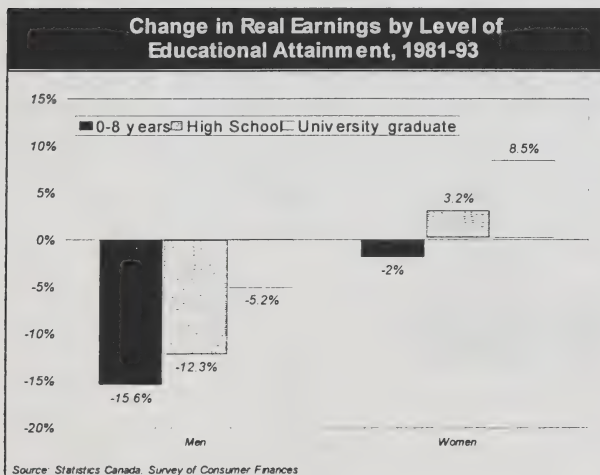
Moreover, the differential between the unemployment rate for those with less than high school education versus those with university degrees increased from 4.6 percentage points in 1976 to 11.1 percentage points in 1995. This situation is even worse among low-educated youth - the unemployment rate for youth with less than high school education was 19.3 percentage points higher than those with university degrees in 1995, up from a differential of 13.2 percentage points in 1976.



These developments have caused many of these workers to leave the labour market. The participation rate of youth has fallen dramatically (by 7 percentage points between 1990 and 1995) while that of older workers has continued its long term trend decline. Moreover, the participation rate of those with less than high school education has been declining steadily since the mid-1970s, and has begun to fall more recently for those with only a high school education.

In general, the reasons behind the decline in labour force participation are not well understood. The decline in the labour force participation of youths has been accompanied by an increase in enrollment in post-secondary institutions, which occurred at a time when Canada already had the highest rate of youth enrollment in post-secondary education. Many youth have become discouraged by the weak labour market conditions and have opted for continued education as an alternative to labour force participation. This may turn out to be a positive development for youth in the long run.

In the case of older workers, early retirement is becoming more common. A 1991 survey of retirees indicated that two-thirds of retired persons had left the labour force before age sixty-five, one-third before age sixty. This development partly reflects the adjustment difficulties faced by these workers: their work experience is often in declining industries, they are less educated and less literate, they are less mobile and less skilled in job search, and employers are reluctant to hire older workers. While older workers have a lower probability of becoming unemployed, regaining employment is much more difficult. Recent research shows that in 1994, only two-thirds of older workers who had regained employment did so within one year. Nearly three-quarters of those displaced had reduced earnings in their second job (General Social Survey, 1994).



It is difficult to assess whether or not the adjustment problems facing older workers will become more severe. While the number of older workers will increase, successive cohorts are better educated, more highly skilled and more likely to have received previous job-related training. It is vital that labour force attachment of older workers be encouraged as it may be difficult for society to support current trends to early retirement.

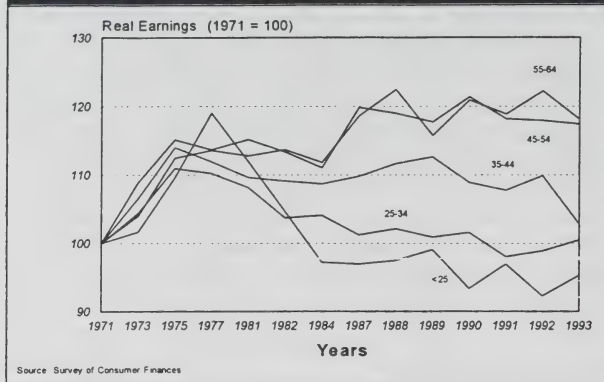
Earnings outcomes

Overall, the real average earnings of all workers have

stagnated over the 1981-1993 period, but this trend hides major changes in the earnings distribution. There has been a clear trend to increased rewards for experience (age) and education.

Indeed, youth and the less educated have experienced substantial declines relative to older and more educated workers. The real earnings of men fell between 1981 and 1993, but the real earnings of men with only a high school education fell faster than those of university educated men. For women, real earnings increased overall but the increase was much larger for university educated women than for those with only a high school education. This increase in the education premium is partly a reflection of the increased demand for high-skilled workers relative to low-skilled workers.

Real Earnings of Full-Time Full-Year Male Earners by Age (1971 - 1993)

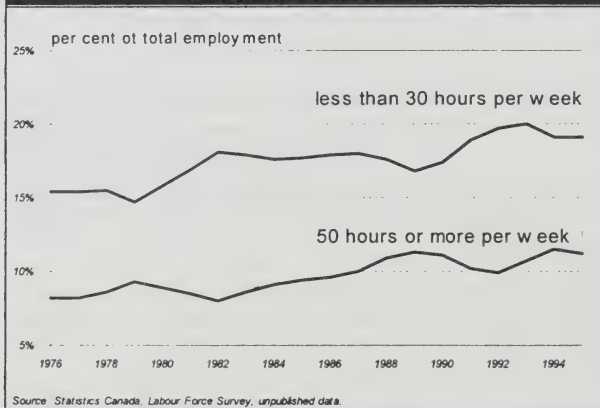


Further, the average real earnings of young males declined substantially relative to those of older males in the mid-1980s and have stagnated since. This partly reflects declining employment rates among youth but also the fact that youth are disproportionately represented in part-time employment.

The redistribution of work and working time that has taken place over the last two decades underlies most of the growing earnings inequality and polarization that has been

observed over this period (Morissette, Myles and Picot, 1993; Morissette and Sunter, 1993; Morissette, 1995; see also companion paper from HRDC on "Individuals and Families Coping with Change"). The redistribution of working time is shifting towards employees who are experienced, skilled and relatively well paid. This redistribution includes not only reduced hours for more Canadians in non-standard jobs, but also increased numbers working very long hours.

Evolution of the Share of Workers Working Long and Short Hours



While most people still work a standard 35-40 hour work week, the proportions of persons working long hours (more than 50) and short hours (less than 30) increased. Between 1976 and 1995, the proportion of workers who worked less than 30 hours per week increased from 15.3 to 19.1 per cent, while the proportion of those who worked over 50 hours increased from 8.2 to 11.2 per cent.

Short hours are concentrated among youth and adult females, and long hours are concentrated among adult males. In addition,

those working shorter hours tend to be lower paid workers, and those working longer hours, the more highly paid.

Labour market performance of recent immigrants

At a time when immigration is becoming an increasingly important aspect of the Canadian labour market, research shows that immigrants are experiencing poor labour market outcomes.

At an annual intake of about 200,000, immigration currently accounts for about fifty per cent of Canada's population and labour force growth. The majority of recent immigrants are from third world countries and admitted mainly on humanitarian grounds.

More recent immigrants are less likely to work year round and more likely to be unemployed than earlier immigrants and native born Canadians (Baker and Benjamin, 1994). As a result, more recent immigrants are also more likely to earn lower wages than earlier immigrants and native born Canadians. For example, Bloom, et al. (1993) estimated that it took, on average, 12.3 years for immigrants admitted between 1961 and 1965 to achieve earnings parity with Canadian-born workers. For immigrants admitted between 1981 and 1985, it would take them over 136 years to achieve income parity.

Overall, immigrants have higher rates of poverty than native-born Canadians - in 1994, 17.8 per cent of immigrant families were living below the poverty line compared to 12.3 per cent for native families. This situation is even worse for immigrants admitted after 1979 with a third of families living in poverty. (Bloom, et al., 1993).

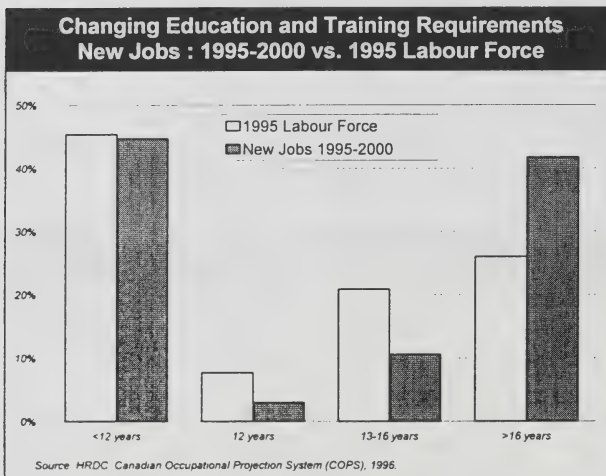
Several explanations have been advanced in the literature to explain these differences, including slower economic growth, discrimination, and lack of proficiency in an official language. While all these factors have played a role, research indicates that the policy shift to a greater emphasis on admitting immigrants for family reunification and on humanitarian grounds is a more likely cause (Baker and Benjamin, 1994). Until the 1970s, the majority of immigrants admitted to Canada were classified as independent immigrants and were selected for their skills. The evidence shows that independent immigrants have the highest earnings, whereas humanitarian class immigrants are less skilled and are more likely to be on welfare (Lui-Gurr, 1995). Thus the change in immigration policy appears to be the main factor behind poor performance of recent immigrants and raises concerns about future labour market outcomes of a growing proportion of the Canadian labour force.

Looking Ahead to 2005

In attempting to assess the implications of recent labour market developments on the future employment and earnings prospects of workers it is necessary to ask whether these changes really represent long-term trends or are more cyclical in nature.

Prospects for unemployment

Of particular concern are the prospects of future reductions in the unemployment rate. There has been a vast amount of research attempting to identify the determinants of the evolution of unemployment rates in Canada, the United States and among OECD countries. The current state of knowledge is well encapsulated in a recent research project sponsored by HRDC which sought to determine the reasons behind the emergence of a significant gap between the Canadian and American unemployment rates since the early 1980s.



One important conclusion of the project was that much, if not all, of the increase in the Canada-US unemployment rate gap in the first half 1990s is due to weaker economic growth in Canada than in the US. Indeed, between 1989 and 1994, real GDP in Canada only grew at an average annual rate of 1.0 per cent compared to 2.0 per cent in the US (Sharpe, 1996).

The consensus among economic forecasters is that unemployment is expected to decline in the short-term as the economy continues to strengthen and the

current output gap is eliminated. Based on these forecasts, HRDC occupational projections indicate that while the economy is expected to create a large number of high-skilled jobs between 1995 and 2000, the economy is also expected to generate a large number of low-skilled jobs. This development may enable some of the recent disturbing trends in labour force participation to reverse as improvements in the economy will increase the relative demand for low-skilled workers. In addition, because youth-intensive industries (accommodation, food, personal and household services, amusement, recreation and retail trade) were among the hardest hit during the last recession, and because youth employment follows a "last-in first-out" pattern, labour market prospects for youth are also expected to improve as the economy gains strength (Lavoie, 1996a; 1996b).

In the longer-term, further reductions in unemployment will depend on the impact of several structural factors which affect both the supply and demand for labour. Several have been advanced in the literature to explain the trend increase in unemployment in Canada and the emergence of the Canada-US unemployment rate gap. These include: the unemployment insurance system, excessive labour costs and taxes, skill mismatches, minimum wages and rates of unionization.

There is no consensus about the impact of the unemployment insurance system on structural unemployment in Canada. Research indicates that UI benefits led to longer durations of unemployment (Card and Riddell, 1995; Corak, 1992, 1995) as well as to increases in labour force participation but could find no significant effect on the incidence of unemployment (Bowlus, 1996; Corak, 1992). It has been estimated that the increase in UI generosity of the 1970s contributed to a higher unemployment rate (estimates range between 0 and 3.5 percentage points). However, cutbacks to the UI programme in the 1980s and the 1990s appear to have reduced the generosity of UI to its pre-1970s levels (Sargent, 1995). A trend decline in unemployment is expected as the effects of the tightening of the UI program continue to work themselves through the economy.

Recent studies have attributed much of the increase in unemployment rates in recent years to rising payroll deductions. However, it is difficult to reconcile the results of these macroeconomic studies with analysis based on international comparisons of countries with different levels of payroll deductions. This analysis shows little correlation between employment and unemployment performance and the levels of payroll contributions. Payroll tax increases can lead to lower demand for labour in the short run because employers pass on such increases to consumers through higher prices, which in turn, reduces consumption and output. However, in the long run, workers bear most of the burden of employers' social security contributions through lower wages. The OECD reports that in the long run, Canadian workers bear about eighty per cent of the burden on employers' contributions to social security programs (OECD, 1994).

Skill and geographic mismatches are a factor in the Canadian economy but at present are not considered a major source of structural unemployment.

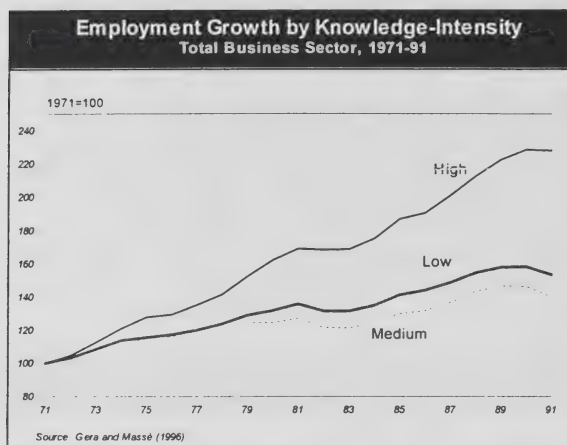
There is no evidence that minimum wages have contributed to a rise in unemployment over the last fifteen years while the evidence on the effect of unionization is inconclusive. (Sharpe, 1996).

In summary, there are no short-term fixes to reduce the structural component of the unemployment rate. As the OECD argued, following an extensive review of the job situation in industrialized countries, the single most important cause of rising unemployment is the failure of OECD economies to adapt and innovate (OECD, 1994). The growth of jobs and incomes in the future relies on this fundamental process of innovation and adaptation.

Moving towards a knowledge-based economy

There is a growing consensus among academics and policy makers that knowledge and, in particular, technical knowledge associated with information and communication technologies (ICTs), will be the key engine of economic

and employment growth over the medium and long-term. In fact, recent evidence suggests that the knowledge-intensive and technology-intensive parts of the economy have become the most dynamic in terms of output and employment growth. A recent study of changes in the industrial structure of employment, prepared jointly by the HRDC and Industry Canada found that employment growth has been more rapid in knowledge-intensive industries - those showing the highest levels of R&D activity, high-skilled occupations and highly educated workforces - than in medium- and low-knowledge industries (Gera and Massé, 1996).



In the manufacturing sector, high-knowledge and technology-intensive industries experienced the highest employment growth while low-knowledge and low-technology manufacturing industries have shed jobs. However, the main source of employment growth remains the service sector, with gains in employment coming from both high-knowledge and low-knowledge service industries. In fact, the top six fastest growing industries were services industries - led by three high-knowledge services (business services, educational services and health services) and by three low-knowledge services (personal services, recreation services, and accommodation and food services).

Employment Growth by Knowledge Intensity, 1971-91

Top 10 Business Sector Industries*

Industries	Knowledge	Employment Growth: 1971-91 % per year*
Business Services	High	5.90
Educational Services Industry	High	5.43
Health & Social Services	High	5.41
Personal Services	Low	5.28
Recreation Services	Low	4.98
Accommodation & Food Services	Low	4.59
Plastic Products Industries	Medium	4.55
Fishing & Trapping Industries	Low	3.95
Mineral Fuels	Medium	3.86
Services Incidental to Mining	Medium	3.83

* based on 53 industries aggregation scheme

Though their share has increased, knowledge-intensive industries still only account for a small proportion of total business sector employment in Canada -- around 15 per cent in 1991. The Canadian economy is still primarily medium- to low-knowledge intensive.

The role of organizational and human resources management practices

New technologies are increasingly important contributors to the output and employment growth performance of knowledge-intensive and technology-intensive industries, particularly since the second half of the 1980s (Gera and Mang, 1995; Gera and Massé, 1996). Firm-level evidence in the manufacturing sector indicates that high-performance firms and high-technology industries, characterized by more innovative behaviour or use of more advanced technologies, have above-average productivity and employment growth, as well as above-average success in international markets (OECD, 1994, 1996a; Baldwin, Gray, Johnson, 1995).

However, there is a growing body of research which suggests that investments in technology alone are not enough. Concomitant intangible investments in workplace organization and human resource management are necessary to ensure that new technologies are used optimally (OECD, 1996).

While innovative firms are more successful than their non-innovative counterparts, they also place greater importance on human resources and the quality of management and training (Baldwin and Johnson, 1995a, 1995b, 1996; Baldwin, Diverty and Johnson, 1995). Various organizational innovations such as employee involvement in decision-making and job redesign and practices such as pay for knowledge, team-work and Total Quality Management can have positive effects on corporate performance outcomes such as productivity, costs, customer satisfaction, labour relations, etc.

Yet many firms are not innovative with respect to human resource management practices and continue to sustain "traditional" human resource approaches, i.e., placing a low priority on training and development of workers, employee participation, innovative compensation practices and workplace flexibility (Betcherman, 1994, 1996). Recent survey evidence indicates that roughly 70 per cent of establishments were pursuing traditional approaches while 30 per cent were pursuing elements of more innovative practices (Betcherman, 1996).

Clearly, the evidence indicates that economies and firms that innovate and adapt are more likely to succeed than those who don't. As a result, the trends towards the increased knowledge-intensity of economic activity and the increased focus on innovative workplace practices are likely to be pursued, especially in the context of globalization.

Skills gaps could widen?

Canadians lack the skills required for a rapid transition to the new economy. While skills are traditionally seen in terms of specific technological skills, the new economy requires broad and highly transferable skills. These "basic skills" include problem-solving skills, reading, numeracy, writing, oral communication, information technologies and the ability to learn. The skills are not basic in the sense of being low level or elemental but cover a wide range of proficiencies.

The International Adult Literacy Survey (IALS) is a breakthrough in our measurement of human capital and allows one to define and measure skill deficits more broadly (IALS surveyed prose, document and quantitative literacy). IALS shows that many Canadians lack even a minimal foundation in skills and that this has serious consequences for employment and earnings. These individuals clearly suffer a skills deficit. However, even workers at higher levels of achievement may not possess the skills required by their current job or recognise their deficiency. Many Canadian workers possess the skills required in their present jobs but are performing at a skill level that would make it very difficult to meet new skill requirements to find a new job or to pursue further training and education. This is a hidden skills deficit (Statistics Canada, HRDC, National Literacy Secretariat, 1996; OECD and Statistics Canada, 1996).

Skills are maintained and strengthened in daily practice. While the education system is crucial to the acquisition of literacy skills, literacy practices at home and in the workplace are also important. Physical fitness is an apt metaphor that best reflects this new understanding of how these skills are acquired and perfected. IALS shows that the skill requirements of the workplace and the actual skills possessed by workers are connected in a complex way. Do workers lose skills because their jobs do not require them or conversely can jobs be upgraded to foster and reinforce the development of a more skilled workforce? Workers who lack the prerequisite basic skills, including the ability to learn new technology skills quickly, will be increasingly vulnerable and excluded from the high growth and high quality job market.

It is clear that despite the growing overall levels of educational attainment of the Canadian population there are wide gaps between the less educated and more highly educated. Many students do not complete high school and many leave without a sound foundation in basic skills. In addition, the more highly educated and affluent are much more likely to access further education and training (Jennings, 1996a).

Lifelong learning is becoming a new reality for many Canadians and, by providing training opportunities, the workplace will play an increasingly important role in the development of workers' skills. Today, a large proportion of training undertaken by the population is sponsored by

employers. For example, in 1993, over 50 per cent of the training and almost 16 per cent of educational programs were supported at least in part by an employer (Jennings, 1996a).

Yet, the evidence indicates that access to further education is unequally distributed in the workforce, favouring those with stable employment, high-levels of education and income. Recent results from the Adult Education and Training Survey, sponsored by HRDC, indicates that those workers most likely to participate in employer-sponsored training were full-time, white-collar workers with a post-secondary education and earning an annual income of \$35,000 or more (Jennings, 1996a). These results are consistent with those of other surveys (Betcherman, 1996) who found that the employers that are less likely to offer formal training are those that are more likely to offer less stable, lower skilled employment.

The current regime of lifelong learning may therefore be contributing to the rising inequalities between skilled and unskilled workers. These inequalities may be further aggravated by the fact that, compared to a more broadly accessible system, an employer-sponsored training system also limits access to further education to the unemployed and those not in the labour force. There is a risk that current skills gaps will widen over time and could be exacerbated by the current structure of skills acquisition.

Conclusion

Our review of the state of knowledge on recent labour market developments indicates that Canadians' sense of insecurity about employment and earnings prospects are largely justified. High levels of unemployment continue to persist while employment growth has been anaemic. Many of the jobs that are available are increasingly less stable and pay less than before. In addition, employment and earnings opportunities have not been shared equally, with youth and low-educated workers losing out to more experienced and more highly educated workers.

However, some of the pessimism is not always warranted. Educated youth seem to be adjusting and still succeeding quite well on the labour market. In addition, the growth of non-standard employment is often a reflection of the needs and choices of employers and workers alike.

The increasing importance of knowledge, technological change and associated changes in workplace practices are some of the profound changes that are contributing, either directly or indirectly to increased insecurity faced by workers. New technologies are rendering some skills obsolete and creating requirements for new skills across a broad range of occupations. Shifts in work organization have also influenced the skills sets required in the economy. The speed at which these changes are occurring is increasing the pressures on the adjustment capacity of workers, particularly for the least skilled.

While these developments are central to growing labour market insecurity, they also hold the key to reversing this situation in the long-run. The knowledge- and technology-intensive parts of the economy are becoming the most dynamic in terms of output and employment growth. However, their overall importance remains small and the current speed of adjustment towards the knowledge-based economy may not be as high as would be desirable.

Whether the underlying forces shaping changes in the labour market will further aggravate the trends toward increased inequalities in earnings and employment opportunities will depend on the quality of the education system and on the institutional framework that gives workers the opportunity to obtain the reschooling and retraining they need to make the employment transitions throughout their working lives. Inequalities in access to training opportunities inherent in the current regime of lifelong learning are not encouraging in this respect. In the long run, the persistence of these inequalities increases the risk of marginalization and exclusion of an important portion of the workforce.

Knowledge Gaps and Workplan Research

Unemployment

There are several areas deserving additional attention to deepen our understanding of the causes and circumstances of unemployment. One area that would deserve additional attention is the question of the scarring effects of unemployment and hysteresis. If the prolonged period of high unemployment and its longer average duration observed over the past 15 years have caused a permanent deterioration of the labour market prospects of large numbers of individuals, because of scarring or under-investment in human capital, then the medium-term labour market and social outlooks could be worse than envisaged. Other areas deserving attention include:

- ☐ How have the policy changes of the last several years affected the evolution of structural unemployment in Canada? In particular, what are the prospects for a reduction in unemployment as a result of recent reforms to the unemployment insurance system? Should the active labour market orientation of social programmes such as UI and social assistance be increased further?
- ☐ Are the coverage and level of support adequate for the new economic environment? Which policies are most appropriate for helping workers make employment transitions in the short-term?

Two surveys are currently being developed by HRDC that will cast further light on the unemployment experience of Canadians. The Survey of the EI Coverage of the Canadian Population will help assess the adequacy of income support offered to unemployed Canadians and help understand the reasons for the decline in the proportion of unemployed that receive UI

benefits. The Canadian Out of Employment Panel Survey will help assess the impact of EI reforms on the duration of benefits, on the intensity of work search activity and on the transition between EI and social assistance.

Labour force participation

Perhaps even more important than what is happening to unemployment are the recent trends in labour force participation. Is the decline in labour force participation of the 1990s a cyclical phenomenon in response to poor economic conditions, a reflection of recent cuts in the generosity of unemployment insurance that made it less attractive for workers with a weak attachment to the labour force or could it be attributable to other structural developments in the Canadian economy? The response to this question will determine to what extent unemployment could fall over coming years and to what extent the reduction in participation represents a weakening of the production potential of the Canadian economy.

A research project on the causes of the decline in labour force participation rate is currently in preparation in HRDC. This project will attempt to disentangle cyclical and structural influences and will examine whether social policy changes may have had a role to play.

The Changing nature of work

Whether or not changes in the nature of work are positive or negative, they do have implications for our ability to create wealth, and for the sharing of opportunities and income within society. There are important knowledge gaps around this topic which must be filled:

- ☐ To what the extent increases in non-standard work correspond to a long-term trend? How much is cyclical in nature?
- ☐ What is the relationship between employers' competitive environment, strategic choices and the changing nature of employment;
- ☐ More needs to be known about individual and family preferences in balancing education, work and family. As the economy improves these are likely to play a more important role.
- ☐ Are there approaches to adjustment that would reduce the sense of insecurity?

The identification of trends in the nature and organization of work and in the structure of the economy and the impact that these developments may have on labour market performance and incomes distribution is a continuing research interest of HRDC. Studies and seminars on the "future of work" have been an important feature of last year's research workplan. The next few years will present great opportunities for advancing the knowledge in these areas as new longitudinal and other data sources will become available. The Survey of Labour and Income Dynamics and the Work Arrangements Survey will provide rich data bases for this research. In

the longer term the Workplace and Employee Survey, sponsored by HRDC, will generate longitudinal data on these issues. The results of a pilot survey are currently being analysed.

Older Workers

There will be more older workers as a proportion of the labour force in coming years. The patterns of early retirement merit further work with an emphasis on different models of work and retirement. Little is known about the wealth of older workers and its distribution by gender. Other knowledge gaps include:

- ☐ What are the non-market societal costs and benefits to early retirement? Are people who retire as healthy as if they continued working? Is volunteer activity higher for early retirees than for the general population? Do retirees provide important non-market service support to family members?
- ☐ Why is the labour market adjustment experience of older workers more difficult? Why are employers reluctant to hire older workers? Does this reluctance reflect the period of unemployment time required to justify employers' investments in training?

Three projects are planned for older workers:

- ☐ Use of the Survey of Labour Income and Dynamics will permit an analysis of the dynamics of early retirement, especially the degree to which it is voluntary or forced by lack of labour market success. This survey can also be used to explore the mobility characteristics of older workers as they relate to adjustment.
- ☐ Work with the Workplace and Employee Survey will explore the differential labour market experiences of older workers within firms.
- ☐ The International Adult Literacy Survey will be used to show the effect of literacy on labour market adjustment of older workers.

Immigration

There are several gaps in our knowledge of the labour market experience of immigrants, in particular as they relate to the fact that immigration is concentrated in a few major urban areas. Yet very little analysis has been conducted of the impact of immigration of the economy and social infrastructure of these communities.

In the area of immigration, HRDC supports the Metropolis Project with its four Centres of Excellence. Metropolis will address a series of economic and labour market issues with a focus on the urban level. HRDC will also examine the links between immigration and unemployment in the three largest metropolitan areas. Another project will examine the role of immigration in filling labour market gaps and a third will examine the effect of business immigration on employment.

Innovative workplace practices

Research in this area has been focused on establishing the incidence of technological and organizational change and human resource management practices and on examining the relationship to outcomes of firms. Research gaps include:

- ☐ a better understanding of how innovative practices “bundle” to create a “high performance workplace”;
- ☐ a better understanding of the “intervening variables” at the level of the firm which affect the outcome of any innovative practice. That is, why does a practice have a positive productivity effect in one firm and not another? Are there an infinite number of “best practices” depending on the environment? Or can we generalize best organizational and HRM principles to some degree?
- ☐ understanding impediments to the implementation of identified best practices; and,
- ☐ the identification of mechanisms to encourage more widespread adoption of best practices and to support equitable sharing of productivity gains.

HRDC will continue its work with the OECD’s Expert Group on Technological and Organizational Change. The work program for the next stage will include:

- ☐ working with business and organized labour to more clearly define the attributes, costs and benefits of “high performance workplaces” and related HRM practices, and define appropriate strategies for business, employees and governments to increase their diffusion;
- ☐ critically evaluating the features and extent of government policies which have been introduced to develop and diffuse those practices more widely.

In this respect, HRDC will be hosting an OECD conference, including business, labour and government representatives, in Ottawa in December to begin this work.

Intensive Canadian efforts in the area of workplace innovation will be focused on the analysis of the pilot Workplace and Employee Survey (the sample database is approximately 700 firms linked to 2300 workers). This survey has collected pilot data on technological, organizational and HRM practices, firm and worker characteristics and outcomes. Should this pilot prove successful, and the survey be implemented longitudinally, it will support the most advanced research possible on technology, organizational and HRM practices in the OECD.

Industry Canada is a very active player in research on the impact of human resources on the economy and workplace innovation. A paper on technology and human resources will examine the impact of continuing

changes in technology on employment, productivity, skill requirements, wage distribution and workplace organization. Industry Canada is also preparing a paper on human resource management strategies in high performance workplaces. This paper will cover a wide range of innovative workplace and management practices and the policy implications for government.

Human Capital Development

The evidence suggests that skills and knowledge are increasingly important determinants of output and employment growth. Yet, little is known about the impact of human capital on growth and incomes distribution at the micro level of the firm and the national level. While international analysis allows comparisons of different education systems and economic structures, there are still important gaps in the measurement of training outcomes and informal learning at the level of the firm. Specific questions include:

- ☐ What role does human capital play in achieving broader economic and social objectives?
- ☐ While the private rates of return to education are well understood, what are its the social costs and benefits?
- ☐ What are the impediments to a more effective and equitable system of lifelong learning? What is the role of firms, individuals families and public institutions.

The International Adult Literacy Survey (IALS) provides a rich research platform to answer many of these questions. In addition to the Canada Report expected in September, HRDC and Statistics Canada have commissioned a series of thematic monographs by noted academic researchers. The themes include literacy and poverty, literacy and the economy, literacy and immigration, literacy and young adults and the effect of literacy practices at home and the workplace on literacy.

Work is also proceeding on the development of the National Skills Survey, also sponsored by HRDC, that will measure the full range of basic skills using the approach adopted by IALS. Current plans are to combine the survey with the Workplace and Employee Survey and eventually to monitor skill acquisition in the workplace longitudinally. The National Skill Survey will provide a comprehensive accounting of Canada's skills and captures both formal and informal learning.

Work is proceeding in adding other countries to IALS and the major partners (the Netherlands, Sweden, Germany and the US) will participate in an international study of basic skills. IALS and the National Skills Survey are projects in which Canada is taking a lead role and through which it is contributing to the OECD's research program on human capital indicators.

Finally, HRDC's research in human capital also includes the analysis of the National Graduates Survey and the Adult Education and Training Survey as well as research on student loans. In addition, HRDC is a leading participant in the OECD's project to develop measures on the rate of return of human capital investment which would enable cross-country comparisons of expenditure levels and their outcomes in terms of quality and performance.

References

- Akbari, Ather.H. (1995, "The Impact of Immigrants on Canada's Treasury, Circa 1990", in *Diminishing Returns*, op. cit.
- Atkinson, John, and Mark Spilsbury (1993), *Basic Skills and Jobs*. London: Adult Literacy and Basic Skills Unit.
- Australian Education Council and Ministers for Vocational Education, Employment and Training (1993), *Putting General Education to Work. The key Competencies Report*. Canberra Australian Education Council.
- Baldwin, J., T.Grey, and J. Johnson (1995), *Technology Use, Training, and Plant-Specific Knowledge in Manufacturing Establishments*, Research Paper No. 86, Analytical Studies Branch, Ottawa: Statistics Canada
- Baldwin, J. and J.Johnson (1995a), *Human Capital Development and Innovation: The Case of Training in Small and Medium-Sized Firms*, Research Paper No. 74, Analytical Studies Branch, Ottawa: Statistics Canada.
- Baldwin, J. and J. Johnson, (1995b). *Business Strategies in More and Less-Innovative Firms in Canada*, Research Paper No. 73, Analytical Studies Branch, Accepted for publication in *Research Policy*.
- Baldin, J., and J. Johnson (1996), "Human Capital Development and Innovation: A Sectoral Analysis," in Peter Howitt (ed.) *The Implications of Knowledge-Based Growth for Micro-Economic Policies*, Calgary University of Calgary Press.
- Baldwin, J., B. Diverty, and J. Johnson (1995), "Success, Innovation, Technology, and Human Resource Strategies - An Interactive System", paper presented at the conference on "The Effects of Technology and Innovation on Firm Performance and Employment", Washington, DC, 1-2 May.
- Baker, Michael and Dwayne Benjamin (1994), "The performance of immigrants in the Canadian labour market", *The Journal of Labour Economics*, July.
- Baker, Michael and Dwayne Benjamin (1995), "Labour market outcomes and the participation of immigrant women in Canadian transfer programs", in Don J. DeVoretz (ed), *Diminishing Returns The Economics of Canada's Recent immigration Policy* (C.D. Howe Institute).

- Baker, Michael and Dwayne Benjamin (1995), "The receipt of transfer payments by immigrants to Canada", *Journal of Human Resources*, Fall.
- Baldwin, J., B. Diverty, and D. Sabourin (1995), "Technology Use and Industrial Transformation: Empirical Perspectives", Research Paper No. 75, Analytical Studies Branch, Statistics Canada.
- Baldwin, J., M. Da Pont (1996), "Innovation in Canadian Manufacturing Enterprises: Survey of Innovation and Advanced Technology 1993", Statistics Canada, Catalogue no. 88-513-XPB.
- Beck, N. (1992), *Shifting Gears: Thriving in the New Economy*, Harper Collins Publishers Ltd. Toronto.
- Berryman and Bailey (1992), *The Double Helix of Education and the Economy*, Institute of Education and the Economy, Teachers College/ Columbia University, New York, New York.
- Bloom, David, Morley Gunderson, and Gilles Grenier (1993), *The Changing Labour Market Position of Canadian Immigrants*, working paper #9305, Department of Economics, University of Ottawa.
- Borjas, George (1994), "The Economics of Immigration", *The Journal of Economic Literature*, December.
- Borjas, George (1988), *International Differences in the Labour Market Performance of Immigrants* (Michigan: Upjohn Institute).
- Bowlus, A. (1996) "What Generation X can tell us about the Canada-US Unemployment Rate Gap, Paper presented at the Conference on the Canada-US Unemployment Rate Gap, February 9-10, 1996, Ottawa, Ontario.
- Card, D. and C. Riddell (1995) "Unemployment in Canada and the United States: A Further Analysis", paper presented at the annual meetings of the Canadian Economic Association, June 2-4, UQAM, Montreal, Quebec.
- Couillard, Robert (1993), *The 1990 Adult Education and Training Survey*. Ottawa: Employment and Immigration Canada and Statistics Canada.
- Corak, M. (1992) "The Duration of Unemployment Insurance Payments", Economic Council of Canada, Working Paper No. 42.
- Corak, M. (1995) "Effets fiscaux de l'assurance-chômage sur le marché du travail Canadien: un survol", Statistique Canada, Analyse des entreprises et du marché du travail, no. 62.
- Cozier, B and K. Mang, (1994), "Explaining the Jobless Recovery", Department of Finance, mimeo.
- Daggett, Willard R. (1991), *Identifying the Skills Students Need for Success in the Workplace: Implications for Curriculum Assessment*. Prepared for the Council of Chief State School Officers. Schenectady, NY: International Center for Leadership in Education.

deVoretz, Don.J. and Ather.H. Akbari (1992), "The substitutability of foreign-born labour in Canadian production, circa 1980", *Canadian Journal of Economics*, August.

Drouin, Marie-Josée (1990), *Workforce Literacy: An Economic Challenge for Canada*. Montreal: Hudson Institute of Canada.

Economic Council of Canada (1990), *Good Jobs and Bad Jobs, Employment in the Service Economy*, Ottawa: Ministry of Supply and Services.

Economic Council of Canada (1991), *Economic and Social Impacts of Immigration*, Ottawa:Ministry of Supply and Services.

Economic Council of Canada (1992), *A Lot to Learn: Education and Training in Canada*. Ottawa:Ministry of Supply and Services.

Ekos Research Associates, *Human Resources in Small Business*, Paper prepared for Entrepreneurship and Small Business Branch, Industry Canada, 1996.

Foot, David K. With Daniel Stoffman (1996), *Boom, Bust and Echo, How to Profit from Coming Demographic Shift*, Macfarlane Walter & Ross, Toronto.

Gera, S. and K. Mang (1995), "Changing Canadian Industrial Structure - Shifts in Output Growth", Industry Canada Working Paper.

Gera S. and P. Massé (1996), "Employment Performance in the Knowledge-Based Economy, Applied Research Branch working paper (forthcoming).

Howitt, Peter (ed.). *The Implications of Knowledge-Based Growth for Micro- Economic Policies*, Industry Canada Research Series, 1996.

Human Resources Development Canada (1996a), "Technological and Organizational Change and Labour Demand/flexible Enterprise: Human Resource Implications", Country Report for Canada.

Human Resources Development Canada (1996b), "The Future of Work : Trends in the Changing Nature of Employment", mimeo.

Industry & Science Canada (1993) *Striving for Quality* (Ottawa: ISC Oct. 1993). Inpax Policy Services International Ltd., *Innovation. Skills and Learning in SMEs*, Paper prepared for Strategic Policy Branch. Industry Canada, 1995.

Jennings, P. (1996a) *Employer-sponsored Training in Canada: Evidence from the 1994 Adult Education and Training Survey*, Applied Research Branch Working Paper, 1996.

Jennings, P. (1996b), "Trends in the Relationship Between Earnings, Education and Age", Human Resources Development Canada, miméo.

Jones, Stan (1996), Background for a Canadian Basic Jobs Skills Tests, unpublished.

Lavoie, C. (1996a) "Special Report, Youth Employment", Quarterly Macroeconomic and Labour Market Review, Winter, 1996.

Lavoie, C. (1996b) "Special Report, Youth Unemployment", Quarterly Macroeconomic and Labour Market Review, Spring, 1996.

Lee, F. And H. Has (1996), "A Quantitative Assessment of High-Knowledge Industries Versus Low-Knowledge Industries" in Howitt ed.(1996), *The Implications of Knowledge-Based Growth for Micro-Economic Policies*, The University of Calgary Press, Ministry of Supply and Services Canada.

Levin, Benjamin (1995), Poverty and Education, Education Canada, the Canadian Education Association.

Lui-Gurr, Susanna (1995), "The British Columbia Experience with Immigrants and Welfare Dependency, 1989", in *Diminishing Returns*, op. cit.

Marr, William and Pierre Syklos (1995), "Immigration and Unemployment: A Canadian Macroeconomic Perspective", in *Diminishing Returns*, op cit.

Massé, P. (1995), La reprise sans emploi: qu'en est-il?, Human Resources Development Canada, Applied Research Branch, Research Paper No. R-95-9.

McLaughlin, Maryann (1992), Employability Skills Profile: What Are Employers Looking For? Report 81-92-E. Ottawa: The Conference Board of Canada.

McMullen, K. (1996), "Skill and Employment Effects of Computer-Based Technology: The Results of the Working with Technology Survey III", Canadian Policy Research Networks Inc., Ottawa, (forthcoming).

Morissette, R. (1995) "Why Has Inequality in Weekly earnings Increased In Canada?", Analytical Studies Branch Research Paper Series, no. 80.

Morissette, R. (1992) "Canadian Jobs and Firm Size: Do Smaller Firms Pay Less?", Statistics Canada, Analytical Studies Branch Research Paper Series, no. 35.

Morissette, R., Myles, J. and G. Picot (1993) "What is Happening to Earnings Inequality in Canada?", Statistics Canada, Analytical Studies Branch Research Paper Series, no 60.

Morissette, R. and Sunter, D. (1993) "What is Happening to Weekly Hours Worked in Canada?", Statistics Canada, Analytical Studies Branch Research Paper Series, no. 65.

Newton, Keith. Management Skill Development in Canada, Industry Canada Occasional Paper No. 13, 1995.

Newton, Keith. Measurement Issues: The High Performance Workplace and Intellectual Capital, Industry Canada, 1996.

Oates, Tim (1992a), Developing and Piloting the NCVQ Core Skill Units: An Outline of Method and a Summary of Findings. Report 16. London: National Council on Vocational Qualifications.

Oates, Tim (1992b), Core Skills and transfer: aiming high. Educational and Training Technology International 29: 227-239.

OECD (1996a), "Technology, Productivity and Job Creation", OECD, Paris (forthcoming).

OECD (1996b), "The Knowledge-Based Economy", OECD, Paris.

Ontario Premier's Council (1990), People and Skills in the New Global Economy. Toronto: Premier's Council.

Organisation for Economic Co-operation and Economic Development (1995), Education and Employment, Indicators of Education Systems, Centre for Educational Research and Innovation, Paris.

Organisation for Economic Co-operation and Economic Development (1995), Learning beyond Schooling, New Forms of Supply and New Demands, Centre for Educational Research and Innovation, Paris:

Organisation for Economic Co-operation and Economic Development (1996), Lifelong Learning for All, Meeting of the Education Committee of the Ministerial Level, 16-17 January 1996, Paris

Organisation for Economic Co-operation and Economic Development (1996), Measuring what People Know, Human Capital Accounting for the Knowledge Economy, Paris.

Organisation for Economic Co-operation and Economic Development (1996), Our Children at Risk, Centre for Educational Research and Innovation, Paris.

OECD (1994), "The OECD Jobs Study: Evidence and Explanations; Part I: Labour Market Trends and Underlying Forces of Change", OECD, Paris.

OECD and Statistics Canada (1995), *"Literacy, Economy and Society: Results of the first International Adult Literacy Survey"*, OECD, Paris.

Osberg, Lars, Fred Wien and Jan Grude (1995). Vanishing Jobs: Canada's Changing Workplaces. Toronto: James Lorimer.

Osberg, Lars, Edward N. Wolff and WilliamJ Baumol (1989), The Information Economy: the Implications of Unbalanced Growth, Halifax: The Institute for Research on Public Policy.

Peters, Suzanne, (1995), Exploring Canadian Values: Foundations for Well-Being, Canadian Policy Research Networks available from Renouf Publishing Co. Ltd., Ottawa.

- Picot, G., Baldwin, J., and R. Dupuy (1994) "Have Small Firms Created a Disproportionate Share of New Jobs in Canada? A Reassessment of the Facts", Statistics Canada, Analytical Studies Branch Research Paper Series, no. 71.
- Rao, P.S. and C. Kapsalis (1982), "Labour Market Shortages and Immigration Policy", Canadian Public Policy, Summer.
- Rose, G (1992), "Employment Growth in High-Tech and Knowledge Industries", Mimeo, Department of Finance, Economic Analysis and Forecasting Division, November.
- Riddell, W. C. (1995), "Human Capital Formation in Canada: Recent Developments and Policy Responses", in Banting and Beach ed. (1995), Labour Market Polarization and Social Policy Reform, School of Policy Studies.
- Sargent, T. (1995) "An Index of Unemployment Insurance Disincentives", Department of Finance, Working paper no. 95-10.
- Sharpe, A (1996) "The Canada-US unemployment Rate Gap: An Assessment of Possible Causes, Centre for the Study of Living Standards, July, 1996
- Sonen, Carl (1989), *"Medium and Long-Term Macroeconomic Implications of Increased Immigration"*, a study prepared for Employment and Immigration Canada, September.
- Statistics Canada, HRDC, National Literacy Secretariat, (1996) "Reading the Future: A Portrait of Literacy in Canada", Statistic Canada, Catalogue no. 89-551-XPE.
- Steering Group on Prosperity (Oct 92.), *Inventing our Future, An Action Plan for Canada's Prosperity*, Chapter 3, Building a Learning Culture in Canada, Ottawa.

8

Individuals and Families Coping with Change

There is a consensus among policy-makers and other interested Canadians that Canada has undergone significant economic, social and demographic changes in the postwar period, in particular in the last twenty years. It is also commonly held that our most evident social problems reflect a failure of our society, and our governments, to adjust to these changes. This paper focuses on four of the most critical social policy challenges confronting Canada:

- ☐ how to prevent the growth of inequality and consequent polarization of Canadian society into "haves" and "have-nots";
- ☐ how to ensure the healthy development of children in the context of significant changes in family life;
- ☐ how to ensure a smoother transition to the labour market for Canadian youth; and
- ☐ how to provide economic security and opportunities for continued participation for a growing elderly population.

It would be possible to consider each of these problems in isolation, by looking at the specific causes and consequences of the problem, as a prelude to understanding the range of potential policy "solutions" for each. However, the real challenge for policy makers is to understand that these seemingly disparate problems are, in fact, interdependent. In turn, policy choices in one area may significantly constrain options in another.

The purpose of this paper is to describe what we know, and do not yet know, about the key social challenges facing Canada. The paper begins by setting out a framework that pulls together what research tells us about the linkages between the social problems described above. The paper concludes by describing research findings particular to each problem.

The Human Development Perspective

The human development perspective is based on the premise that the well-being and effective functioning of a society is a product of the healthy development and active participation of its individual members and families. According to this perspective, significant deficiencies, or deficits, in human development will ultimately manifest themselves as social problems. The “value added” of the perspective is that it doesn’t focus on a particular aspect of human experience (e.g., childhood, employment, leisure), but rather looks at the relationships between the many roles and activities people undertake over their lives.

To understand the evolution and functioning of a particular society, the human development perspective focuses on two processes. First, it examines the process by which individuals (or population cohorts) make the transition from one stage of the life course to another. Key *transition points* include the transition from home to school for young children, the transition from school to work for youth, the transition to parenthood for working-age adults and the transition from work to retirement.

Transition points present both an opportunity and a risk. Individuals who have built up the necessary competencies and assets will negotiate transitions successfully and will be able to make a (continued) contribution to society. Those who arrive at transition points without the necessary competencies are more likely to suffer negative outcomes in both the short-term and later in life (negative outcomes may include poorer health, educational attainment and labour market participation). At the level of society as a whole, successful transitions are a prerequisite for economic productivity and growth. Conversely, uneven transitions across the population will contribute to social inequality and fragmentation. In short, the human development perspective looks at the capacity of the population to cope with change as a key determinant of social and economic well-being. Understanding the characteristics of successful, and unsuccessful, transitions at each life stage accordingly becomes a key focus for policy research.

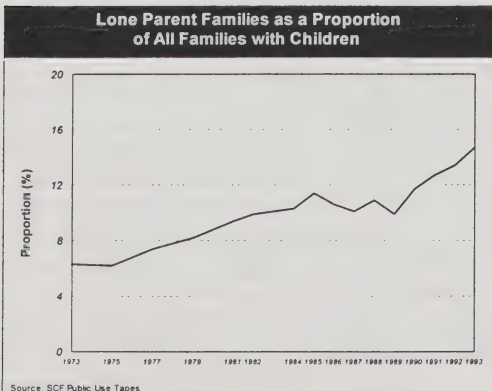
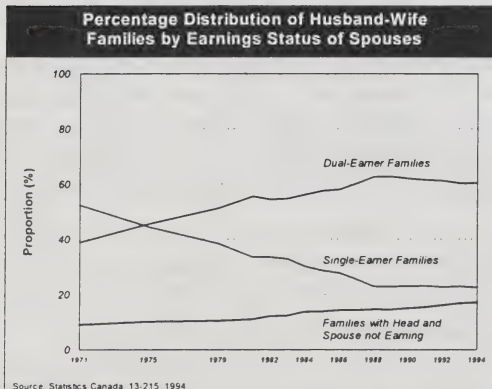
The human development perspective also focuses on how individuals organize their lives to carry out key life activities. The perspective uses the concept of time allocation to illustrate how choices with respect to one activity influence outcomes in other areas. Key life activities are typically defined to include learning, work, care of dependents and leisure. Over time, a *society’s* overall allocation of time between these key activities changes, as individuals change the way they allocate time at particular stages of their lives, and as demographic change shifts the balance of total time between various stages of the life course (for example, as the population ages, the way seniors

allocate their time will increasingly shape a society's overall allocation of time among key activities).

What does time allocation tell us about the process of social change and the prospects for productivity and social cohesion? The human development perspective assumes that individuals seek an appropriate balance between learning, work, care and leisure, and that they will alter this balance as their needs and preferences change over the course of their lives. Similarly, a society seeks a balance that meets economic and social needs and is consistent with prevailing social values. The consequences of "deficits" in time allocation to key activities are obvious. Inadequate allocation of time to learning and/or work will affect productivity. inadequate allocation of time to care of dependents will affect the health and well-being of the population, and so on.

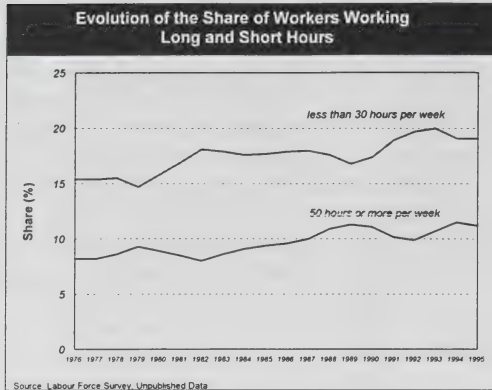
Canada in the Postwar Era

This new perspective can help us to re-interpret the significance of the key social, demographic and economic changes that will carry Canada into the next century. In brief, these "megatrends" can be described as follows:



- ❑ The nature of family life in Canada has changed. The family structure of male breadwinner/mother at home that was once typical has been replaced by the dual-earner family as the most common family type. The proportion of lone-parent families has also been growing as a result of both increased marital instability and a higher incidence of child-bearing by never-married women;
- ❑ allowing for normal cyclical variations, real average disposable family incomes have been stagnant for the past twenty years. Among young men, real annual earnings actually declined by 20 percent between 1977 and 1993;
- ❑ employment has become more turbulent. Levels of unemployment have increased over the past decades. While the average duration of job

tenure has increased since the mid-70s, there has also been an increase in the number of jobs held for six months or less;



□ the distribution of working time became more polarized in the 1980s and 1990s. While average hours of work have remained constant, some workers (usually the most highly skilled and highly paid) are working longer hours than in the past at the same time as others are working shorter hours. Close to one in five dual-earner couples, including those with children, are spending a total of 90 hours or more at work each week;

- the skill requirements of jobs have shifted upward since the 1970s. A growing number of workers and young people have responded by taking the time to acquire more skills;
- Canada's population is aging. Canada's dependency ratio¹ will rise gradually as the baby boom generation moves into retirement. And the size of Canada's real "dependent" elderly population may grow even faster than demographic projections would suggest, if the pattern of increasingly early withdrawal from work continues.
- finally, rising levels of immigration and the growing proportion of new arrivals from non-European countries continues to generate greater cultural, ethnic and linguistic diversity in Canada.

Implications of Change for Human Development

The "megatrends" described above have undoubtedly had a dramatic impact on the economy, governments and other social institutions. What do these trends tell us, in the aggregate, about future prospects for human development?

One obvious conclusion is that the number of transitions that take place in the average life course has increased. Relative to the past, a "typical" Canadian is likely to have more parents (including step-parents), more spouses, more employers and more formal or work-based learning experiences over his/her lifetime. At the same time as these transitions present new opportunities, in the aggregate they also increase the risk of poor outcomes for individuals unable to adjust to continuous change. In fact,

¹ The dependency ratio is the population aged 0-14 and 65 and over as a proportion of the total population.

there is evidence of growing disparity in the capacity of Canadians to make these adjustments (see section below on Inequality). Even among Canadians who have been able to successfully negotiate key transitions, the knowledge that the number of required transitions is increasing, with the associated risk of poor outcomes at each transition, is a key source of the pervasive insecurity documented in public opinion surveys.

A second overall conclusion is that there have been significant changes in the way men and, even more so, women organize their lives. Formal learning was previously restricted largely to children and youth. Today, the average duration of formal education has increased and is more likely to consume a portion of the adult years. The gender-based division of paid work and unpaid care activities has also broken down. Women no longer devote the bulk of their "working" years to the care of children and other dependents. Although women have fewer children than in the past, the majority now combine care responsibilities and full-time paid employment. Retirement at age 65 is no longer standard.

Although we do not yet have the tools to determine precisely how the allocation of time to key activities has changed over the life course and within each stage of the life course, there is ample evidence of serious imbalances in time allocation both on the part of individuals and across society as a whole. Many of today's most daunting social policy challenges can be traced to this imbalance.

Imbalance is most apparent among working-age Canadians. As the time devoted to learning early in life increases and the time devoted to leisure later in life increases, the relative time available to fulfil commitments to work is compressed².

Many workers simultaneously bear the burden of caring for young children or other dependents, creating the potential for an acute "time crunch" problem. There is evidence that increasing numbers of working parents, in particular working mothers, are experiencing significant levels of time stress.

Imbalances across society are also obvious. Leisure is unevenly distributed -- some workers have too little leisure, with possible impacts on mental health and labour productivity. Other age cohorts and disadvantaged groups -- youth, the unemployed and welfare recipients, visible minority Canadians -- are experiencing unwanted leisure based on exclusion from the labour market or involuntary part-time employment. Segments of the elderly population want to reduce the leisure they currently have available, in favour of spending

² Initial efforts to construct "Life Paths" statistical indicators for Canada provided a vivid illustration of the impact of increasing life expectancy, later entry to the labour force and earlier retirement on the years available for work. In 1941 Canadian men worked an average of 9.4 years for each year they spent in retirement. By 1971 the number of working years per year of retirement had fallen to 5.4. Although these indicators have not been updated, given what we know about the continued decline in fertility and more rapid population aging, we would expect to see further declines in working years per year of retirement after 1971.

more time in productive community activities or in the care of family members. The way our society organizes the care of young children has changed dramatically-- time spent with parents has declined as time spent with substitute caregivers has increased (Saraceno, 1996). Care of the elderly has also been increasingly institutionalized as daughters and other female relatives are no longer available to care for the aged. Both the private sector and governments have had difficulty keeping pace with the demand for provision of child and elder care outside the family.

Stage of the Life Course

The human development perspective described above provides an aggregated picture of the linkages between the stages of the life course and between key life activities. The focus on linkages continues throughout the paper, but is organized around the issue of how well Canadians are coping at particular stages of the life course: childhood; youth; and old age. The fourth stage of the life course, the working years, is not discussed here because it is the subject of a separate paper entitled "The Canadian Labour Market". Finally the paper provides a more detailed analysis of the cross-cutting issue of inequality.

a) The Changing Requirements For Investment In Children And Families

Given the "megatrends" of the past twenty years, there is a substantial amount of concern, in all developed nations, about the changing fortunes of the family and its capacity to invest in children. In Canada, there are two general concerns. The first is the issue of how to deal with child poverty. The second concern is the linkage between the current developmental paths of secure children (i.e., those not considered to be "at risk") and Canada's future capacity to maintain a flexible and productive workforce and engaged citizenry.

As noted above, the structure, behaviour and economic security of the family have undergone considerable change in the past 20 years. For today's children, these changes imply a greater likelihood of growing up in a dual-earner or lone-parent family, with significantly less access to parental time (Shields, 1993). Declining fertility means that children's wider kin networks have also shrunk. As a consequence, institutions outside the family, such as schools and daycare play a stronger role in socialization and child development than in the past. Economic insecurity is more pervasive as a result of stagnant family incomes, changes in the nature of work and the restructuring of public supports. Some analysts have gone so far as to suggest that the private costs of raising children have now increased to the point that additional public investments may be required to sustain even the current below-replacement level of fertility (Folbre, 1994).

Resources for children

Child development takes place across four domains: cognitive, physical, emotional and social. Research has identified developmental "windows of opportunity" during which the bases for adult competencies are established

in each domain. In order to reach these developmental milestones, children require a range of resources: income; social support within the family, including adequate time with parents; and support within the broader community.

1) income

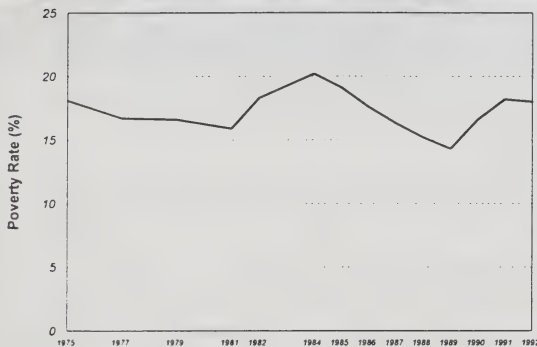
The incidence of low income among Canadian children remains high compared to other industrialized countries (18 percent in 1992) and has remained stable, after adjusting for the economic cycle at its 1975 level. And the outlook for future trends in child poverty is not optimistic. At the same time as poor families have become increasingly dependent on transfers from governments, governments have moved to reduce spending on many of these programs. Furthermore, continued growth in the proportion of lone-parent families will place upward pressure on the child poverty rate, all other things being equal. It should be noted that trends in the depth of child poverty, or

poverty gap, have been more positive. In 1975, poor parents had 63 percent of the income required to escape poverty; by 1992, they had 66 percent of the required income.

The federal government's new National Longitudinal Survey of Children and Youth (NLSCY) establishes a definitive link between poverty and most child outcomes. Simply, poor kids have poorer health outcomes, lower educational attainments, live in riskier environments and engage in riskier behaviours than non-poor kids (Ross, 1996).

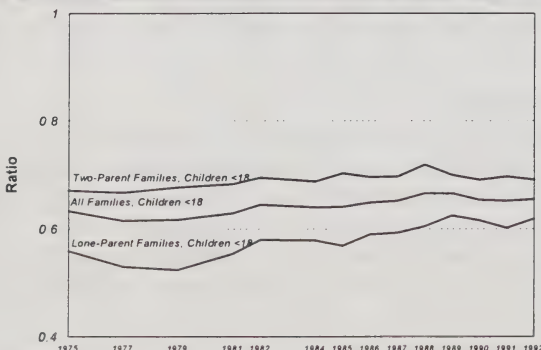
Although the rate of child poverty is not increasing, there is preliminary evidence that the nature of child poverty is changing in ways that imply worsening outcomes for children who are poor. For example, an increasing proportion of poor children live in lone-parent families (46 percent of all poor children in 1992). NLSCY data suggest that being the offspring of a single-mother places a child at increased risk of emotional, behavioural and academic difficulties, whether or not the family is poor (Lipman and

**Children in Low-Income Families,
Canada, 1975-1992**



Source: SCF Public Use Tapes, estimates based on 1986 LICOs

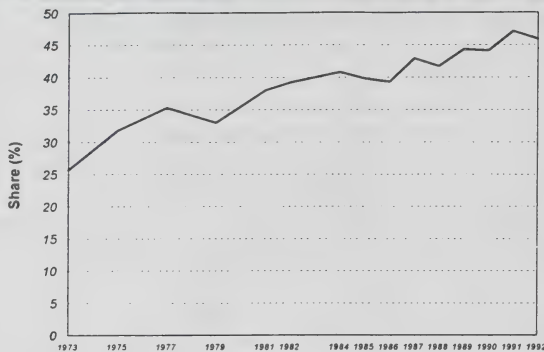
**Average Income-to-Needs Ratio*: 1975-1992
Poor Families with Children <18**



Source: SCF Public Use Tapes

*Income-to-needs ratio ranges in value from 0 to 1. A value of 0 indicates that a family has zero income and a value of 1 indicates that a family has 100% of the income needed to escape poverty.

**Share of Poor Children Living in Lone-Parent Families
Children <18**



Source: SCF Public Use Tapes

Offord, 1996). The duration of poverty is also associated with more negative outcomes and there is reason to believe that the duration of poverty is growing.

Although there is obviously a strong association between low income and child outcomes, the *causal* role played by income remains controversial. Further research is required to determine precisely how low income impacts on a child's environment to produce poor outcomes. Some studies conclude that income contributes to child development through both direct

mechanisms (e.g., purchase of learning materials, purchase of high quality child care and/or residence in neighbourhoods with better schools) and indirect mechanisms (e.g., mental health of parents, self-esteem of adolescents) (Duncan, 1996). A better understanding of the pathways from low income to poor outcomes could assist in critical decisions on the appropriate mix of policy instruments (i.e., income support vs. services) for low-income families (Currie, 1993).

ii) support within the family

The adequacy of social support which children receive within the family is more difficult to measure.

Social support for children within the family is a product of both time available and the nature or quality of children's relationship with their parent. American research suggests that the combination of growth in dual-earner and lone-parent families and a secular increase in hours of work has reduced the potential time parents spend with children by as much as 40 percent over the past thirty years. While parenting behaviour has been shown to be empirically associated with child well-being (Landy, 1996), we know relatively little about how particular aspects of parenting style impact on children, especially children with biological, emotional or cognitive vulnerabilities, to produce bad outcomes.

iii) support within the community

Both American and Canadian analysts have expressed concern about the decline in community support ("social capital") available to families. There is some evidence that the social capital base in Canada has eroded over the past ten years by the marginalization from community life that accompanies unemployment and poverty. There is also evidence indicating a longer-term attitudinal/cultural shift away from a focus on social bonds and obligations in favour of individual self-fulfilment.

Research on the impact of social capital is but indicative at this stage. Some American studies have found social capital variables such as religious involvement, the strength of help networks, local school quality, and educational expectations of friends to be strong predictors of escaping deprivation (see Brooks-Gunn et. al for discussion of the issue).

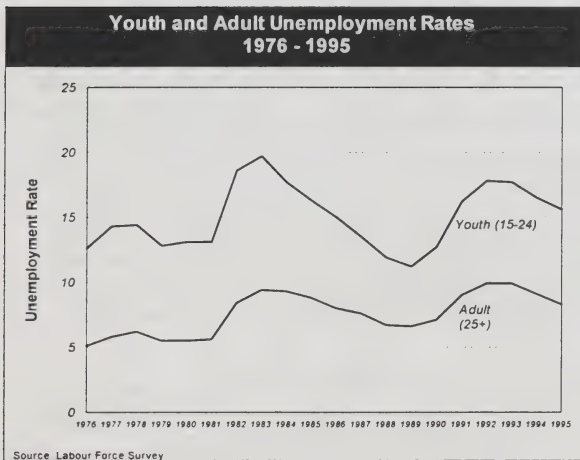
More is known about the impact of child care provided outside the family. Quality child care appears to have no negative effect on children and may, in fact, be beneficial for children from disadvantaged backgrounds. Conversely, children who receive poor quality child care are more likely to have difficulties on a range of outcome measures.

b) Disadvantaged Youth

This generation of youth is thought to be doing much worse in many dimensions of social and economic life than the earlier generation of "Baby Boomers". It is widely believed that the long term job prospects of young persons are declining and that youth will face increasing difficulty finding satisfying and rewarding work. The key issue for governments is whether the

current problems facing youth are simply a reflection of the high overall levels of unemployment or due in some part to deeply rooted structural problems such as poor school-work linkages, demographic shifts and changes in the skill requirements of the work place.

The unemployment rate of youth exceeds that of the adult population. However, the gap between adult and youth unemployment appears to be no greater than in the past. The gap does appear to widen during periods of recession.



Highly educated youth have much better employment prospects than their less educated peers. The unemployment rates of youth with university degrees have remained stable from 1976 to 1995, while the unemployment rate for those with some high school or a high school diploma rose dramatically.

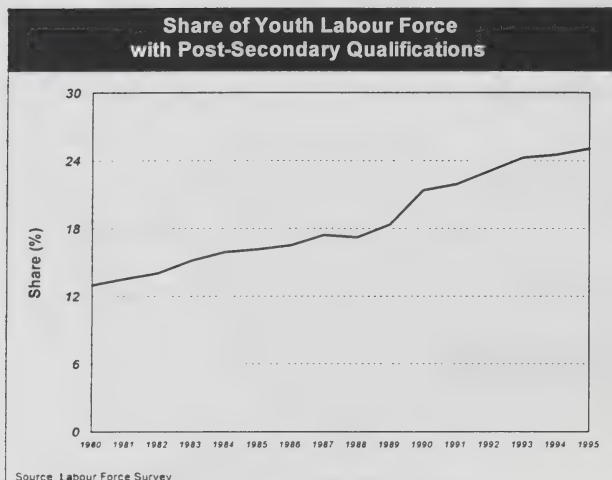
Data on annual earnings provide the strongest evidence of a secular decline in the fortunes of Canadian youth. Average earnings of youth declined substantially over the 1984 to 1993 period. More importantly, the gap in earnings between 17-24 year-olds and all other age groups has increased. Much of the decline in annual earnings among the young since 1989 is explained by growing proportion of employed youth who work only part-time hours.

What determines labour market success?

The most conclusive finding of the research is that education is important to the success of youth in today's labour market -- less educated youth are clearly at a disadvantage.

In the aggregate, the Canadian workforce is becoming more highly educated and skilled in response to technological change and the globalization of

markets. Even in the period from 1991 to 1995, employment of those with university education increased substantially while those with grade 8 or less continued to plummet. A significant proportion of youth have responded to these changes by staying in school longer; the percentage of the youth labour force with post-secondary qualifications increased from thirteen percent in 1980 to over twenty-five percent in 1995. We do not know the *extent* to which post-secondary education remains a good investment and a follow-up survey of 1990 graduates is underway to explore this issue.



There is some evidence from recent focus groups that the pathways through college and university are not simple; many students enter the post-secondary system with poorly defined objectives and expectations and are unsure of whether or not college or university would best meet their interests and needs.

At the other end of the spectrum, there are still many young persons who enter the labour market without the sound foundation in general skills that is required to learn new skills quickly and to adapt to changing skill requirements. Of the seven countries in the recent International Adult Literacy Survey (IALS), Canada had a higher proportion of young persons at the lowest measured level of literacy than Germany, the Netherlands, Sweden and Switzerland. This finding is of particular concern given that Canadian employers are as interested in generic job skills and attitudes toward work as they are in the more advanced technical skills required by new and emerging technologies. A profile of desired employability skills developed by Canadian employers included: communications skills; thinking skills such as critical thinking and problem solving; accessing information and the effective use of technology; learning how to learn; positive attitudes and behaviours; responsibility, including setting goals, managing time and accountability for actions taken; adaptability, including a positive attitude to change and creativity; and teamwork skills. Employers rank job applicants' attitudes,

communications skills and previous work experience more highly in the selection process than academic performance or test scores.

We know relatively little about the prospects for youth who enter the labour market without high-school completion. Traditionally, less educated young persons have tended to enter the labour market in low skilled occupations and progressed to more highly skilled and highly paid occupations as they accumulated job experience. It is possible that this pattern of career progression will no longer be possible if the growth of middle-level positions remains sluggish. Forthcoming data from the School Leavers Follow-up Survey will help determine whether youth who enter the labour market with high school education or less are becoming trapped in a series of short-duration, low-skilled jobs without hope of career advancement.

The results of qualitative analysis

It is worth noting that public opinion on youth is largely at odds with the findings of empirical research. Canadians are very pessimistic about the prospects for today's youth. While there is still a widespread belief that education is the road to success, many people also believe that university graduates are unable to find jobs or are taking jobs that were previously held by high school completers. This perception is not consistent with evidence from the National Graduates Surveys and other sources.

In some areas, public opinion may point the way to better policy interventions for youth. Participants in focus groups conducted by HRDC were almost unanimous in their view that a lack of information on career prospects and educational choices explained some of the difficulties youth were experiencing. There was a similar agreement that programs such as co-operative education and youth internships that combine classroom education and work experience were highly effective and fostered better connections between high schools and the labour market.

c) Aging Population

As the predominant group outside of the labour market in society shifts from those of school age to the elderly, there will be profound economic and social consequences. Some see these changes as taking place gradually; the consequences seem far off so there is no sense of urgency. Others, motivated by the rising cost of seniors' programs and scepticism about the future potential of the economy would prefer to act now to reduce future public sector obligations.

Individual aging refers to the trend toward longer life. Population aging refers to the increase in the proportion of the population in older age groups. The Canadian population is aging as a result of the combination of the aging of the baby boom generation and a continued decline in the fertility rate.

The projection of current demographic trends into the future produces an unbalanced and unstable scenario in several respects. The most visible impact will be on social programs. An aging population is expected to have

profound effects on the coordination, delivery and sustainability of public programs. For example, there is pressure to review current benefit levels, eligibility, and incentive structures in public pensions to offset future fiscal pressures associated with a growing elderly population. Similarly, rising health care costs are expected to accompany population aging although the main cost drivers lie in other factors (see paper on Health and Well-Being).

Population aging also results in changed patterns of saving, investment, and ultimately national wealth. We would expect that aging populations will reduce both public and private national savings. Public savings will be eroded because of the spending pressures created to support an older population. Private savings may also dwindle as older populations erode their own savings to compensate for the absence of market income. However, available empirical evidence suggests that, in fact, savings do not decline as individuals age. More research is needed to clarify the implications of population aging for private wealth.

Population aging raises the average age of those who are working, yet there is no consensus among experts on what this implies for labour market outcomes. Some analysts expect that population aging will eventually reduce unemployment, increase the emphasis on lifelong learning and skill upgrading, and create shortages of entry level workers. In turn, this would imply the need to keep older workers in the labour market, in part by facilitating more successful adjustment to periods of unemployment or layoff. Unfortunately, early evidence from OECD countries that have already experienced some workforce aging does not support these predictions -- in these countries, both aggregate and youth unemployment remain high.

Finally, the aging experience is very different for men than for women, since women have different patterns of labour force participation, earn lower wages and live (alone) longer. Women experience longer periods of frailty and poverty near the end of their lives.

Implications of active aging³

At the same time as the population is aging, we are witnessing changes in behaviour and outcomes over the life course and within each stage of the life course (for example, the trend toward more active aging). To the extent that we wish to use public policy to shape societal outcomes in the future, we need to have a better understanding of these changes. For example, we now know that individuals of various ages live through a wide range of physical, social and cognitive experiences at different stages of the life course and that these experiences determine the outcomes of the "golden years". Previously, outcomes in old age were believed to be inexorably linked to the passage of

³ Active aging refers to the flexible allocation of time to key life activities over the entire life course, i.e., the integration of learning, work, leisure and caregiving at all stages of life. The concept of active aging is fully developed in the document entitled "Policy Implications of Ageing Populations", OECD, April 1996.

calendar years. In terms of public research agendas, this implies that research on all major stages of the life course and their key transition points can improve our understanding of how our society will age.

Research has revealed that the elderly can no longer be considered a homogenous group. In fact, differences in the health and social characteristics of people in the same age group can be greater than across different age groups. Therefore, framing the population into a "working age" category of 25 to 64 year olds, with a separate "elderly" category for the population 65 and older is no longer a useful approach to analysis of issues related to health, social needs, skills and cognition.

Although older people are not a homogeneous group, it is generally true that their living standards have improved over the last twenty years in Canada as well as in many other developed nations. Average incomes have risen and the poverty rate has dropped significantly for older people mainly because of the improved coverage and benefit rates in the public pension system. We need to know more about the scope for public policy to alter the balance between the public and private costs associated with aging.

Improvements in the health and wealth of seniors should give policy-makers more flexibility in dealing with population aging. We need to know more about both the current contributions of elderly Canadians and the potential for the elderly to make greater contributions in the areas of work, learning, and caregiving.

What we do know about aggregate trends is not encouraging -- in the postwar era, there has been a significant reduction in the average number of working years per year of retirement. This trend has in fact *reduced* the flexibility of policy-makers to reallocate resources to support an aging population. The changing age profile in employment has raised difficult issues related to reduced opportunities for upward mobility, age discrimination, work/family balance, and productivity. Survey research currently underway will provide deeper insight into the ways in which the employment experience of workers, including workplace policies on early retirement, influences retirement decisions and the capacity of workers to remain in employment for longer periods.

Inequality

The issue of inequality cuts across many of the current pressure points in Canada. Inequality may limit human resource development and the potential for economic growth (see paper on "The Canadian Labour Market"). The impact of family inequality on children is of particular concern, given what we know about the importance of early childhood for adult outcomes. Inequality is also a factor in growing political alienation and the disjuncture in values between Canadian "elites" and the general population (see paper on "Canadian Identity and Values").

Policy research has focused on four aspects of inequality:

- ☐ the decline of the middle class and the polarization of society into haves and have-nots;
- ☐ poverty, including child poverty;
- ☐ extreme poverty, or the potential for creation of an underclass; and
- ☐ horizontal inequality (inequality across income groups) based on race, gender, immigrant status, disability or region.

The discussion here will focus largely on the first aspect of inequality and child poverty. The issue of extreme poverty is not addressed in this paper, primarily because this is a new area of research in Canada and relatively little is known about excluded populations. A separate paper on "Aboriginal Issues" does discuss what we know about extreme poverty among the aboriginal population. Horizontal inequality is addressed as an element of the other aspects of inequality where appropriate.

Over the past economic cycle, (1984-1993), there has been almost no change in real average family market and disposable incomes, a sharp break from the significant increases in real income that occurred in the 1960s and '70s. At first glance, it would appear that there has also been no increase in income inequality -- family disposable⁴ income inequality did not increase in Canada between 1984-1993 (Hatfield, 1996a). It is worth noting that disposable income inequality did increase over the same period in the U.S., and a number of European countries (OECD 1996). However, the stability of disposable income inequality masks a significant increase in inequality based on family market income.⁵ In other words, disposable income inequality would have increased over the economic cycle, if not for the fact that personal transfers from governments, in combination with the impact of the progressive income tax system, have more than offset the negative impact of the market on family income inequality (Hatfield 1996a).⁶ Child poverty trends exhibit the same pattern, i.e., while aggregate poverty is not increasing, in fact the poverty gap has declined over the last 20 years, this is due to weakening market incomes and increased government transfers (Zyblock, 1996b).

There are several components behind the growth in aggregate family market income inequality. Males are the primary source of market income in most families, and inequality in male earnings is growing (Zyblock 1996c). Furthermore, changes in family composition have meant an increase in the proportion of families headed by female lone parents and seniors who have low or no market incomes (Hatfield 1996a).

⁴ Disposable income includes income from earnings, government transfers and all other sources, less income taxes.

⁵ Market income refers to all cash income excluding personal transfer payments from governments.

⁶ Transfers from governments have played a more significant role than the income tax system in offsetting market income inequality.

Economic recession has had a strong impact on income inequality -- income inequality in Canada increased 5.5 percent⁷ from 1984 to 1993, composed of a 3 percent decline in inequality from 1984 to 1989 and a 8.5 percent increase in inequality during the downturn of 1989 to 1993. This contrasts with recent trends in the USA, where inequality has risen both in recession and recovery. Indeed, the growing divergence between family income inequality in Canada and the US is accounted for entirely by differences in how inequality in the two countries responds during periods of economic recovery (Hatfield 1996b).

Why is market income inequality increasing?

There is no single cause behind the increase in market inequality in Canada, and no agreement among experts on the relative importance the range of domestic and international factors believed to have played a role.

As was noted above, the increase in full-time, full-year male earnings inequality is an important component of the aggregate increase in inequality (Zyblock, 1996c). Key explanations for this increase include Canada's greater exposure to world trade and/or the impact of new technologies, which render some current skills obsolete while placing a premium on other, more-advanced skills. Analysts have pointed to a range of other possible explanations, including increased competition, deregulation, privatization and a decline in employee bargaining power. In combination, these changes are believed to be responsible for the growing distinction between a core group of well-paid workers with good benefits and reasonable job security and a peripheral group of ill-paid contract workers who are employed only to satisfy peaks in demand.

There has been a strong trend to higher rates of market income deficiency over the last 20 years, (i.e. market incomes below the poverty line, (Zyblock, 1996a). The increase is partly a result of changes in family composition (i.e. relative increase in lone-parent families and elderly couples), but changes in public policy have also played a role. For example, a decline in the proportion of lone parents *with earnings* in Ontario resulted in part from that province's significant increases in real welfare rates beginning in the mid 1980's (Kapsalis, 1996).

What are the consequences of rising market inequality?

To understand the *social* consequences of inequality we would need to know more than we do at present about the experience of inequality *over the life course*. Increasing market inequality means that at any given time more Canadian workers find themselves with low (and high) earnings. This may be because more workers are moving in and out of low income, or it may mean that the same workers with low incomes are remaining there longer. The social consequences of these two potential scenarios are quite different. The former scenario would imply more "churning" in the labour market than in the past, with implications for public insecurity and anxiety. The second

⁷ For purposes of this paper, income inequality is measured by the Gini coefficient, the most comprehensive, commonly-used measure of inequality.

scenario is of greater concern, since it would imply that a particular subset of the population is becoming increasingly marginalized, with potential implications for social cohesion and a range of other outcomes that deteriorate as the time spent in poverty increases.

Preliminary longitudinal research in Canada appears to confirm the second scenario -- workers are remaining in the low income state longer than in the past and the probability of moving up the earnings ladder has decreased slightly, in particular for younger men (Finnie, 1996).

There is also no consensus on the economic consequences of growing market inequality. Some empirical research has established a positive correlation between the degree of social equality in selected countries and their historical capacity for economic growth (Persson 1994).

What is the forecast for inequality?

Recent efforts by governments in Canada to reduce personal transfer payments would be expected to put upward pressure on disposable income inequality, all other things being equal. However this tendency *could* be offset by increases in real earnings, which in the past have been distributed progressively. More empirical work on the impact of growth on income distribution is needed to answer this question. In addition, we need to know more about the potential for reform of government transfer programs to *reduce* inequality via improved incentives to work (e.g., reform of Unemployment Insurance).

Research Workplan

The Human Development Perspective

The current inability to estimate time allocation and to examine changing Life Paths represents a major gap in knowledge. It is particularly important to estimate lifepaths on a sub-annual basis to go beyond the misleading traditional dependency ratio calculations. It may be possible to partially address this gap through participation in the second phase of the OECD's work on active aging.

A number of other HRDC initiatives are underway to enhance our capacity to measure and monitor human development. A Symposium on Social Well-Being will take place in Toronto on October 4-5, 1996. The symposium, which is being organized by the Canadian Council on Social Development for HRDC, will bring together international and national researchers and practitioners in the field of defining and measuring well-being in order to advance the process of constructing social indicators for Canada. The symposium will include a presentation by Canadian researchers who have replicated an Index of Social Health developed by the Fordham Institute in the United States.

Also, the Federation of Canadian Municipalities (FCM) has expressed an interest in working with HRDC on the development of a locally-based national reporting system on social conditions and quality of community life.

Finally, a federal-provincial Working Group on Social Development Research and Information co-chaired by HRDC and one province, has been established under the auspices of Federal-Provincial-Territorial Social Service Ministers. One of the tasks of this group will be to promote the development of both broad social indicators and performance indicators for specific social programs.

Children, Youth and Their Families

The National Longitudinal Survey of Children and Youth underpins the research plan on child development. Results from the first wave of the first cycle of the survey of children aged 0 to 11 will be published in October. Results of the second wave will be published in summer 1997. A comprehensive research plan is being prepared to maximize research possibilities from the first cycle and to help refine future cycles. Themes include the factors that determine readiness to learn coping with changing families and communities and the importance of socio-economic status for child outcomes. The second cycle of the survey will provide information on the same children at two points in time and will thereby enable researchers to begin exploiting the real explanatory power of the survey.

Other work on child development includes the addition of a survey of child outcomes to the Self-Sufficiency Project. The objective of this survey is to examine the impact of parental employment on the children of former welfare recipients to address the critical issue of income pathways on child development. HRDC is also working with the Conference Board of Canada on the issue of readiness to learn in young children, sorting out the difference influences on children in different circumstances is the research priority of this activity.

Work on youth will focus on analysis of the pathways through college and university and returns to education in the labour market using the National Graduates Follow-up Survey (This is a 1995 survey of 1990 graduates which will be repeated in 1997 with students who graduated in 1995.) Separate research is underway to examine how post-secondary institutions will adjust to changes in post-secondary funding and student financing.

In addition, an experiment is being conducted with the Province of Nova Scotia on various models of school-based internship. While the full results of the experiment will not be known for a few years, qualitative information on best practices will be available shortly from the case study component of the study.

Work on the family as a whole is focused on a pilot survey being conducted by CPRN to examine the exchange of resources and supports within the family and how these transactions affect labour supply, the distribution of income within the household and the provision of caregiving. This represents a first attempt to grapple directly with the issue of social capital within the family in Canada. Other work in the family area includes creation of an index of insecurity for families with children. Useful in itself, this work will provide the

basis for future research on the impact of insecurity on family functioning. Linked to this work will be an analysis of never married lone-parents and their characteristics and a literature review on the economic aspects of family formation.

As part of the evolving role of the federal government in social policy, another important area of family research is the creation of national expenditure, beneficiary and program design information for services provided to families and children. HRDC is working with provincial governments to document child welfare services. CPRN, with HRDC support, will hold a workshop in September to discuss gaps in social program information.

Finally, HRDC and Statistics Canada are sponsoring a conference on "The Family, the State and Intergenerational Equity in Canada" in February 1997. The conference will cover a wide range of research issues, including the age incidence of government programs, the interaction of labour markets and social programs, the intergenerational transmission of well-being and family intergenerational support.

Active Aging Society

A work plan is being developed in the area of intergenerational equity. Under consideration are projects to develop better measures of capital stock inherited from previous generations as well as new approaches to generational accounting of public expenditures.

The development of longitudinal survey data on individual wealth is needed to enhance our understanding of the dynamics of the retirement decision and the scope to alter the balance between public and private responsibility for costs associated with aging. As a first step, a range of partners are being brought together to consider the possibility of a new wealth survey.

Development of a longitudinal model for the Canada Pension Plan continues in co-operation with the Office of the Superintendent of Financial Institutions. This model will provide input to policy decisions on CPP financing, but will also offer a rich resource for research on savings, transition to retirement and active aging issues.

The Survey of Labour and Income Dynamics will eventually allow for in-depth research into life cycle issues associated with retirement. The Workplace and Employee Survey, if implemented longitudinally, will provide insight into changing corporate policies on early retirement, employment benefits related to pensions, and the employment experiences of older workers which impact their ability to prolong employment.

A planned Survey of Volunteering and Giving, and related conceptual work on civic society, will provide opportunities to examine the contributions of retirees to society and may provide the basis for policy interventions which support greater engagement on the part of seniors.

Inequality

Several projects are being undertaken to examine the social consequences of inequality using the Longitudinal Administrative Database, the new Survey of Labour and Income Dynamics and other non-longitudinal data sources. The objectives of these projects are: to determine whether lifetime inequality is increasing; to measure the duration of poverty (i.e., temporary, recurrent or persistent poverty); and to examine the spatial aspects of poverty concentration (i.e. the potential development of distressed/underclass neighbourhoods). A new national research network centred on the HRDC workplan, is currently being developed. Work by HRDC to develop a common basis for international comparisons of inequality is proceeding with the OECD (Zyblock, 1996d).

HRDC research on the marginalization of particular groups will focus on lone-parents and youth. The Self-Sufficiency Project will determine the effectiveness of earnings supplementation in increasing incomes and reducing dependency among lone-parents on welfare. The School Leavers Follow-up Survey will answer the question of whether youth who enter the labour market with only high school education become trapped in a series of short-duration, low-skilled jobs, or are able to acquire the skills required for progression up the job ladder.

HRDC research on the outlook for inequality and poverty will focus on the relationship between those variables and economic growth. The key question for research is whether the relationship has changed and, if so, how much reduction in inequality and poverty can be expected in the context of future growth scenarios.

Conclusion

To summarize, the research workplan in the area of "coping with change" will focus on three key questions:

- ☐ what are the implications of change for the balance of activities across the life course and within particular stages of the life course?
- ☐ are there sub-groups of the population who are becoming increasingly marginalized from the mainstream of society? and
- ☐ as a society, are we investing enough in our children?

Selected References

- Beach, Charles M and George A. Slotsve (1996). *Are We Becoming Two Societies? Income Polarization and the Myth of the Declining Middle Class in Canada*, C.D. Howe Institute, Toronto, March.
- Brooks-Gunn, Jeanne et al (1994). *Child Development in the Context of Family and Community Resources*, paper presented to the National Research Council's Committee on National Statistics.
- Crompton, Susan (1994), "Left Behind: Lone Mothers in the Labour Market", *Perspectives on Labour and Income*, Statistics Canada, Summer.
- Currie, Janet (1993). "Welfare and The Well-Being of Children. The Relative Effectiveness of Cash and In-Kind Transfers" paper presented to the Canadian Employment and Research Forum.
- Dooley, Martin D. (1994), "The Converging Market Work Patterns of Married Mothers and Lone Mothers in Canada", *Journal of Human Resources*, vol. 29, no.2, Spring.
- Dooley, Martin D. (1994), "Women, Children and Poverty in Canada", *Canadian Public Policy*, vol.20 no.4, December.
- Dooley, Martin D. (1991), "The Demography of Child Poverty in Canada: 1973-1986", *Canadian Studies in Population*, vol.18 no.1.
- Duncan, Greg J. et al. (1996) "Does Childhood Poverty Affect the Life Chances of Children?", paper presented at the annual meetings of the Population Association of America, May 9.
- Economic Council of Canada (1992), *The New Face of Poverty: Income Security Needs of Canadian Families*, Ottawa: Supply and Services Canada.
- Ekos Research Associates Inc. (1995) "Youth Employment Trends", paper prepared for Canadian Policy Research Networks, Ottawa, November.
- Esping-Anderson, Gosta (1996), "Welfare Status at the End of the Century: the Impact of Labour Market, Family and Demographic Change", OECD (*forthcoming*)
- Folbre, Nancy (1994). "Children as Public Goods", *American Economic Review Annual Proceedings*, May
- Finnie, Ross (1996). "Earnings Dynamics in Canada: Evidence from the Longitudinal Administrative Database, 1981 to 1993" Applied Research Branch Working Paper (*forthcoming*), Human Resources Development Canada.
- Hatfield, Michael (1996a). "Family Incomes in Canada:1984-1993. The Roles of Markets, Governments, and Demographics", Applied Research Branch Working Paper (*forthcoming*), Human Resources Development Canada.

Hatfield, Michael (1996b). "Observation on Family Income Inequality in Canada and the United States" Applied Research Branch (*mimeo*), Human Resources Development Canada, April 1996.

Hatfield, Michael (1996c), "Why are Never-Married Lone-Mothers of Pre-School Children More Likely to be Disadvantaged?", Applied Research Branch (*mimeo*), Human Resources Development Canada, January, 1996.

HRDC (1996) "Youth Employment Diagnostique", Applied Research Branch, April 18.

Institute for Research on Poverty (1995). "Indicators of Children Well-Being: Conference Papers, Vol. 1,2,3".

Kapsalis, Constantine (1996) "Social Assistance Benefit Rates and the Employment Rate of Lone-Mothers", Applied Research Branch Working Paper (forthcoming), Human Resources Development

Krahn, Harvey (1996) "School-Work Transitions: Changing Patterns and Research Needs", discussion paper prepared for Applied Research Branch, Human Resources Development, March.

Landy, Sarah and Tam, Kwok Kwan (1996) "Yes, Parenting Does Make a Difference to The Development of Canadian Children" Applied Research Branch Working Paper (forthcoming), Human Resources Development

Lipman, Ellen and Offord, Dan (1996) "What Do We Know About Children From Single-Parent Families?" Applied Research Branch Working Paper (forthcoming), Human Resources Development

Love, Roger and Susan Poulin (1991). "Family Income Inequality in the 1980s", *Perspectives on Labour and Income*, Statistics Canada, #75-001, pp. 51-57, Autumn.

Morissette, Rene, J. Myles and B. Picot (1993). "What is Happening to Earnings Inequality in Canada?", Statistics Canada, Analytical Studies Branch Research Paper Series, no.60.

OECD (1996). "Policy Implications of Aging Populations", Paris: OECD Directorate for Education, Employment, Labour and Social Affairs.

OECD (1995). *Employment Outlook*. Paris.

OECD (1996). *Employment Outlook*. Paris

OECD (1993). *New Orientations for Social Policy*. Paris.

Picot, Garnett and John Myles (1996). "Social Transfers, Changing Family Structure, and Low Income Among Children", Analytical Studies Branch, Statistics Canada, no.82.

Persson, Torsten and Tabellini, Guido, "Is Inequality Harmful for Growth?" *American Economic Review*, Vol. 84, no.3 (June 1994).

Riddell, W. Craig (1996) "Evidence on the Effectiveness of Youth Labour Market Programs in Canada: An Assessment", paper prepared for the Ministerial Task Force on Youth.

Ross, David, Katherine Scott and Mark Kelly (1996). *Child Poverty: What are the Consequences?* Ottawa: Canadian Council on Social Development.

Saraceno, Chiara (1996). "Family Change, Family Policies and the Restructuring of Welfare", draft discussion paper prepared for the OECD Working Party on Social Policy, 11-12 July.

Shields, Craig (1993). "Issues in Family Life and Family Support" draft discussion paper prepared for the Premiers Council on Health, Well-Being and Social Justice. January.

Wolfson, Michael C. (1995). "Socio-Economic Statistics and Public Policy: A New Role for Micro-Simulation Modelling", paper presented to the 50th Session of the International Statistical Institute, Beijing, 21-29 August.

Zyblock, Myles (1996a). "A Labour Market Perspective on Child Poverty in Canada, 1975 to 1993", Applied Research Branch Working Paper (*forthcoming*), Human Resources Development Canada.

————— (1996b). "Child Poverty Trends in Canada: Exploring Depth and Incidence from a Total Money Income Perspective, 1975 to 1992", Applied Research Branch Working Paper, Human Resources Development Canada

————— (1996c). "Individual Earnings Inequality and Polarization: An Exploration into Population Sub-Group Trends in Canada, 1981 to 1993", Applied Research Branch Working Paper, Human Resources Development Canada.

————— (1996d). "Why is Family Market Income Inequality Increasing? Examining the Effects of Aging, Family Formation, Globalization and Technology", Applied Research Branch Working Paper (*forthcoming*), Human Resources Development Canada.

Health and Well-being

"Human development is the end — economic growth a means. So, the purpose of growth should be to enrich peoples lives. But far too often it does not. The recent decades show all too clearly that there is no automatic link between growth and human development. And even when links are established, they may gradually be eroded — unless regularly fortified by skilful and intelligent policy management"

- *United Nations Human Development Report 1996*

Introduction: The Health and Well-being of Populations

In 1996, Canada again earned top ranking against the UN Human Development Index, and second after adjusting for gender-inequality (up from first overall and ninth on gender equality in 1992).

The UN Human Development Index is a composite index of achievement across three dimensions of human achievement: a long and healthy life (measured by life expectancy), knowledge (educational attainment) and standard of living (real GDP per capita). Canada's first-place standing comes in spite of the fact that nine other countries enjoy longer life expectancy, and that six others

have higher real GDP per capita (calculated in purchasing power parities). Our standing against the education index is the highest in the world.

The Human Development Index captures in a few gross measures a broad array of factors and the complex relationships that exist between them. Life expectancy, for example, may seem at face value to be a simple measure of endurance unrelated to the quality of life. But what research tells us about the factors that contribute to health and well-being makes it clear that, at the level of whole populations, a long life cannot be achieved in the absence of societal ground rules that favour inclusiveness, fairness and equality of opportunity.

Work done by McKeown in the UK in the 1960s showed that decreases in mortality from communicable diseases preceded the arrival of effective treatments. This work heavily influenced Lalonde's *New Perspective on the Health of Canadians* (1974), which advanced a "health field concept" where four sets of factors were advanced to account for the appearance and distribution of health and disease: human biology, lifestyle, the physical environment, and the health care system.

Subsequent work by Evans and Stoddart (1990) has taken into account a much broader array of *health determinants* and the complex ways in which these factors interact to shape *population health*. The nature and direction of many associations between health and other factors is not necessarily always clear. Drummond's review of the health economics literature (1990) points to confusion over the precise nature of the association between income and health, and finds evidence of a stronger association between education and both of these other factors.

During the 1970s, Fries examined mortality trends in the US and pointed to the phenomenon of the "compression of morbidity" and the "rectangularization" of aging. With communicable diseases gradually declining in significance, more people were living long enough to die of chronic disease in later life. It is a measure of our success in dealing with the causes of premature death that chronic disease management remains one of the major challenges of our time, and for the future.

On the other hand, this preoccupation with chronic disease has led to the erroneous assumption that communicable disease has ceased to be a major concern among developed economies. This has been shown to be plainly false by the emergence of HIV disease (AIDS), now the third leading cause of death among Canadian men aged 20 to 44, and by a growing appreciation of the climatic, environmental and social factors that account for emerging diseases such as Lassa fever, Ebola and the plague. Canada is not the only country to have allowed its public health infrastructure to erode, and it is our good fortune that we have not yet been challenged in any major way by a lethal virus that is transmitted through casual contact. The resurgence of tuberculosis among aboriginal peoples, and the arrival of drug-resistant TB strains, ought to be seen as the signals that they are: canaries in the coal mine.

A second major observation of the 1970s and 1980s bears on the relationship between health status and socio-economic status. As Marmot's examination of heart disease among UK civil servants (1978) has pointed out, there is a *gradient*, where employment grade explains deaths better than do known cardiovascular risk factors. This observation is supported by Canadian data which show, for example, that men in the top income quintile live 6 years longer than men in the bottom quintile and can expect 14 more years of life free of activity restriction. This gradient is also present but less pronounced among Canadian women: comparable figures are 3 more years of life and 8 more years free of activity restriction.

Of course, aggregated figures mask significant differences between populations: life expectancy among Canada's Aboriginal peoples is 7 years shorter than it is for Canadians as a whole.

From this it is often assumed that health policy reduces to income or labour but it is now clear that health policy is primarily about the development of human capacity. The not infrequent suggestion that, if the health care system is not as potent as are other determinants it need not consume a tenth of the economy, overlooks the relationship between the health care system and other systems within and beyond the health sphere. Health care is one of society's repair shops, and the demand for health services arises as a consequence of the failure of other systems, be they biological, social, economic, or public-health.

Poor health is not the only manifestation of system failure in other spheres. The growing body of research into the antecedents of violence and criminal behaviour points to many of the same factors that predict poor health expectancy and limited prospects for success in the labour market. Data assembled by the National Crime Prevention Council (1995) show that:

- ☐ most federal inmates are undereducated, even though the IQ distribution within the inmate population is not significantly different from that of the general population;
- ☐ approximately 75% - 80% of incarcerated adults were persistent offenders in their youth;
- ☐ there is a developmental sequence between troublesome behaviour at age 8 and criminal behaviour at ages 21-24;
- ☐ a combination of risk factors appears to account for delinquency, among them those associated with poverty and the quality of family relationships in the early years.

Canada's criminal justice statistics show that Aboriginal peoples tend to be incarcerated in numbers that are disproportionately high. Nine per cent of federally incarcerated males are Aboriginal even though they account for 2.5% of Canada's male population, while among women comparable figures are 17% and 3%. Fewer than 20% of Aboriginal offenders had a grade 10 education, less than 17% of them were employed at the time of their offence, and alcohol abuse was identified as a problem among 76% of Aboriginal inmates.

For all the rhetoric about finding a better balance between prevention and treatment and re-investing health care dollars in health promotion strategies that have the potential to deliver higher health-status dividends, the reality to this point has been little more than a transition to a scaled-down "old" system that continues to emphasize doctors and hospitals. And for all the rhetoric about the importance of crime prevention, public attitudes toward criminology and corrections still appear to favour a

tougher law and order stand — more arrests and convictions, and tougher sentencing — than upstream investments in dealing with root causes.

The challenge over the mid term will be to use and augment what is known about the determinants of health and well-being into policies and programs that offer cost-effective alternatives to existing strategies which amount to picking up the pieces. The *status quo* is not sustainable, and while the UN Human Development Report makes it clear that Canada has done well to this point, it is equally clear that on measures such as life expectancy that we have some distance to go.

"Health is a state of complete physical, social and mental well-being, and not merely the absence of disease or injury"

- World Health Organization

State of Knowledge

Socio-Economic Determinants

Health and well-being are shaped by the complex interaction of a number of socio-economic factors. Trends that have become apparent in recent years reveal growing population health challenges owing to the apparent breakdown of a number of important "upstream" determinants. Among them:

- ☐ persistent high levels of structural unemployment and considerable labour-market uncertainty;
- ☐ widening labour market income disparities and declines in family income (especially among young families), declining levels of job satisfaction and higher overall levels of anxiety and discontent;
- ☐ growth in the low-income population that has outpaced total population growth (35.8% vs. 6.5% between 1989 and 1993), and a rise in the number of persons living in households receiving social assistance (7.4% in March, 1984, vs. 10.6% in March, 1993);
- ☐ higher levels of perceived stress among youth, and a youth suicide rate that quadrupled between 1960 and 1991 — a trend that itself masks two other trends: the rate of suicide among young men is 6 times that of young women; and the rate of suicide among young Aboriginal people is 4 to 5 times the national rate;
- ☐ a 124% increase between 1986 and 1993 in the rate of violent crimes committed by youths, which exceeds the rate of increase in violent crimes committed by adults;
- ☐ a federal inmate population that is growing at twice the long-term average rate (5% vs. 2.5% annually), contributing to an incarceration rate which is now fourth highest in the world;
- ☐ growing concerns for personal safety following 15 years of annual increases in violent crime, even though the violent crime rate actually dropped 3% in 1994.

Against this backdrop changes are taking place in the demographic make-up of Canadian society. The study of pregnancy by Wadhera and Miller (1996) shows a decrease in overall pregnancy rates among women aged 15 - 44. The study also reveals a trend towards pregnancy deferral until later years, with marked increases in pregnancy rates among women over 35. Teen pregnancy rates are down from 1975 levels but have increased slightly since the mid-1980s. (They are still well below US levels but still higher than the rates experienced in other countries, notably the Netherlands.)

The phenomenon of deferred pregnancy can be expected to continue, and will contribute to increased demands for assisted reproductive services. Apart from the unknown long-term health effects on the children conceived through assisted means, there will likely be increased parental pressures on their fewer, later-in-life offspring to perform as "superkids", thereby adding to the stresses of growing up.

In marked contrast to the overall phenomenon of population ageing, the Aboriginal population is growing at roughly twice the rate of the Canadian population as a whole. This trend is expected to continue in light of the large proportion of the population now in, or soon to enter, their child-bearing years. More than 30% of the Aboriginal population is under the age of 15 — twice the Canadian percentage — and many young First Nations people are moving to cities in search of work, or simply to escape the isolation of reserves. There will be increased demands for programming that meets the needs of a young Aboriginal population, at a time when most Canadian jurisdictions will be preoccupied with the health care needs of rising numbers of seniors.

Among young people there has been a trend away from some causes of death and towards others: motor vehicle related deaths are down and suicide is up. All things considered, about 80% of Canada's children have been doing well and about 20% are generally at risk, even though the nature of risk changes over time. Death rates do not reveal anything of quality of life, however, and the Canadian Institute for Advanced Research stresses the importance of early childhood development. Studies show that the absence of early stimulation negatively impacts upon neural and cognitive development.

Suicide is the leading cause of death among men aged 20 to 44, followed by cancer. Among women in this age group, the three leading specific causes are motor vehicle accidents, breast cancer and suicide.

Both the justice and health systems advocate a greater focus on prevention through social development and community programs. At the level of dealing with contributing factors, the distinction between "health", "crime prevention" and "social" programming is moot: social malaise can take expression in many forms, but many of the contributing factors are common.

Social cohesion is both the outcome of social policy and the manifestation of widely-held values. It is placed at risk by many factors, not the least of which is a narrow focus on the health of the risk rather than a broader view of the economy and society as a whole.

Research and analysis has revealed a number of key trends. Often, these trends reveal issues requiring resolution, sometimes through additional research, other times through other forms of action.

"Demographics explain about two-thirds of everything"

- David K. Foot

Chronic Diseases

The proportion of Canadian society accounted for by persons over age 65 is expected to increase from the current 12% to about 18% by 2021. "Senior seniors", those over 80, will increase from 2.6% to 4.2% during this period. In absolute numbers, the over-80 population is expected to grow from 300,000 in 1993 to 800,000 by 2016 and to 1.6 million by 2041.

Wilkins' (1996) analysis of the causes of 204,912 deaths in Canada in 1993 shows a rate of 890 deaths per 100,000 males (all age groups) and 534 per 100,000 females. For both sexes, the highest rates of death are in early childhood (628 per 100,000) and over age 65 (4,523 per 100,000). The male death rate surpasses the female rate in all life stages, but the greatest difference is in early and middle adulthood and much of the difference is due to "external" causes, such as motor vehicle crashes.

Ceteris paribus, the future should see a continuation of trends that have already become evident:

- ☐ there has been a steady decline in age-standardized death rates (all causes) in evidence since 1950;
- ☐ this has been matched by a decline in deaths due to circulatory diseases (although there continue to be regional differences — Nova Scotia continues to have more deaths from cardiovascular disease than does Saskatchewan);
- ☐ cancer is the leading cause of death for men and women aged 45 to 64, and circulatory diseases lead causes of death among seniors;
- ☐ the cancer death rate among men peaked in 1988 and has since declined somewhat, but not to 1950 rates; the female cancer rate fell between 1950 and 1976, then rose slightly and has been fairly stable since; and
- ☐ deaths from respiratory disease peaked among men in the mid-1970s and have since fallen to a rate slightly above 1950 levels; in contrast, the rate among women fell from 1950 to 1979 and has slowly risen since, although not as high as 1950 levels.

Projecting these trends into the future, the forecast would appear to call for an increase in cancer-related deaths among men, with lung cancer accounting for about a third. There have been changes in patterns of cancer incidence — not necessarily deaths — which show a rise in diagnoses of cancer of the prostate. Data from the National Cancer Institute of Canada show roughly comparable rates for the diagnosis of the two cancers in 1970, a levelling-off in the rate of increase in lung cancer in the mid-1980s and a continued rise in prostate cancer, with a cross-over occurring about 1989.

Known risk factors for the two cancers are different, with lung cancer deaths reflecting tobacco use and prostate cancer being more or less a function of ageing. (It has been suggested that the prevalence of prostate cancer would be at or near 100% if all men lived to the age of 100, although a diagnosis of prostate cancer does not itself necessarily have clinical significance: death may come from other causes before prostate cancer develops to the point of clinical significance.)

Among women, there have also been changes in cancer patterns. There has been an observed rise in breast cancer among women over 50 although it is not clear how much of the observed increase is due to higher levels of awareness and improved screening and detection. Among younger women, breast cancer rates continue to be stable. There was a cross-over in cervical and lung cancer rates in the mid-1970s. The former has been steadily declining in incidence since 1970, while the latter has been increasing at a somewhat higher rate. Tobacco use by women appears to be a dominant factor.

There will continue to be a large number of tobacco related deaths in the future owing to past and present smoking patterns. Among young men, tobacco use peaked in 1970, and among young women in 1974-75. There followed a sustained decrease in smoking among young people through to 1990, but what happens next remains uncertain and unsettling. As Foot observed in his analysis of the "6.9 million Canadian echo kids entering those gullible, reckless years", "the federal government's decision to make smoking more affordable by lowering taxes and the Supreme Court's decision in 1995 to overturn the ban on cigarette advertising could not have come at a worse time".

Among diseases affecting seniors, Alzheimer's and other dementias were found in 1991 to affect 8% of Canadians 65 and over. There are no time-series data, but the expectation is that dementia will be more prevalent in the future, consistent with what is forecast about ageing and increased life expectancy.

Most of Canada's oldest citizens are women. Life expectancy, however, does not equate with life quality. Trying to develop an accurate picture of women's health is constrained by data limitations, where potentially important variables are not recorded.

A larger proportion of seniors in Canadian society will require a transformation in the way that health care services are delivered but it does not imply a cost explosion. Research has shown that an increased proportion of elderly persons has had a modest impact on medical service utilization, and that the impact of changes in morbidity by itself has had a very small effect. At the level of total health expenditures, the cost-push of population ageing has been estimated at 1% per year. If sustained over a long period — 40 years — the implication would be a marked increase at the level of per capital spending, all things being equal.

On the other hand, research has also shown that service intensity factors are more important than ageing itself in terms of contributing to aggregate resource consumption among seniors in poor health. That is, the fact that the health system is seeing an older clientele is not driving costs upward so much, but the fact that the system is doing more to — and for — them is a factor.

"Ultimately, humanity will have to change its perspective on its place in Earth's ecology if the species hopes to stave off or survive the next plague. Microbes, and their vectors, recognize none of the artificial boundaries erected by human beings"

- Laurie Garrett

Emerging and Re-emerging Infectious Diseases

The US Institute of Medicine, in its examination of emerging microbial threats, stresses that most "new" diseases are not the result of genetic change (influenza being an exception, given the constant arrival of new variants as a result of antigenic shift and antigenic drift). Rather, most "new" diseases result from changes in climate or human ecology that bring human populations into contact with previously unknown

microbes. Among the key factors related to the emergence of "new" diseases are human demographics and behaviour, economic development and land use, microbial adaptation and change, and the breakdown of public health measures.

Much of the health and environment research effort to this point has focussed on the toxic effects of various chemicals and pollutants, and the impact that various environmental factors have on a range of diseases, human biological systems, or discrete Canadian populations. These measures, coupled with regulations aimed at reducing pollutants, have reduced overall environmental risks although some populations remain at elevated risk.

Insights into emerging diseases also demonstrate the complex ways in which a number of factors interact. In infectious disease epidemiology, microbes live within a *reservoir* where they pose no danger to their *host* organisms. Not all pose a threat to human health, although natural and random processes of mutation can result in a virus more dangerous to human health.

Even among microbes that are dangerous to humans there is not necessarily any danger if humans never come into contact with them.

Contact can be made in a number of ways. For *zoonotic* diseases that can be spread directly from host animals to humans, or from one human to another, the mode of transmission can be through *aerosols*, i.e., when the breath of an infected animal or human is inhaled by another. This is the way that influenza reaches humans, and how human-to-human spread of tuberculosis is accomplished.

Other diseases are spread by a *vector* which acts as an intermediary. Quite often the vector is an insect, and the viruses they transmit are referred to as *arboviruses*. Again, many arboviruses do not necessarily constitute a risk to the health of Canadians because climate does not always favour a given vector. Climate and environmental changes do nonetheless work in ways that work for or against a host organism or vector, either directly or by working for or against a host's or vector's natural predator, and increased cultivation of land for agricultural purposes increases the probability of human exposure.

Microbes can be transported to new destinations along the highways of trade and commerce, and with people travelling from one part of the globe to another. Quite apart from trends in immigration, which see large numbers of foreign-born people settle here each year, increased tourism and business travel mean that a disease outbreak anywhere in the world potentially places Canadians at risk, and long-distance air travel further compounds the risk of infection owing to technological changes: in order to improve fuel economy, aircraft built after 1985 were designed to reduce fresh air intake and rely to a greater degree on air recycling.

Recent incidents involving the plague and Ebola resulted in considerable public attention and anxiety. But public health risk is not simply a function of the *consequence* of an exotic and frightening disease such as Ebola or some other viral haemorrhagic fever, but also of its *probability*. A more probable communicable disease candidate in the mid-term is influenza.

Antigenic shift and antigenic drift mean that each year's influenza strain is often different from the last. That is why outbreaks are monitored carefully and why each year's influenza vaccine is "designed" in relation to prevailing strains. Some strains are more virulent than others. In 1918-19, what is thought to have been the Influenza A H1N1 strain accounted for an estimated 50,000 deaths in Canada. Our population was only 8 million, and our World War I deaths over four years of combat claimed 60,661 lives.

The elapsed time between the 1899-1900 pandemic and the one in 1918-19 was 19 years; 39 years elapsed between then and the 1957-58 pandemic, and the 1957-58 and 1968-69 pandemics were separated by only 11 years. In 2005, it will have been 37 years since the last pandemic, and the global movement of goods and people will have greatly increased in the mean time.

A more subtle and insidious risk is found in the emergence of drug resistant strains of "old" diseases, and the spectre of a health care system that may have to learn to do without antibiotics. These "old foes in new clothes" come into being through the use and misuse of antibiotics. When these drugs are prescribed too frequently, or when a patient stops taking them before completing the full course prescribed, conditions favour the evolution of bacterial strains that are resistant to antibiotics. There is only a finite number of antibiotics, and a growing number of microbial infections that can be managed by fewer and fewer of them.

The sustained downward trend in Canadian tuberculosis rates bottomed-out in 1993, and expectations are that the coming years will witness an increase. The trend is most apparent among foreign-born Canadians, although it is unclear whether active infection was present on landing or became active afterward. TB rates among Canada's aboriginal peoples are also on the rise, a trend which is indicative of living conditions.

Poor socio-economic conditions favour both the reactivation of tuberculosis through diminished immune capacity, as well as the spread of the disease through crowded living conditions. Drug-resistant TB strains have also begun to emerge, especially within the US AIDS community but also in Canada. Treating a single case of drug-resistant TB has been known to cost \$250,000.

"The dangers inherent in premature and uncritical implementation of programs for genetic identification suggest that some 'hurdles' might usefully be put in place"

- Patricia Baird

Technological Change

There have been a number of evolutions in the practice of medicine since the Second World War: the pharmaceutical age of the 1950s, the advances in organ and tissue transplantation of the 1970s and 1980s, and the evolution of genetic tests and the promise of genetic therapies in the 1990s and the years ahead. Sometimes the advances of one field are dependent upon the advances in another,

such as the development of immunosuppressant drugs to overcome rejection of transplanted organs. There have also been significant advances in other spheres of technology, notably the information sciences, which have direct application to health.

Technological evolution is at once an integral feature of health care and yet exceedingly difficult for the system to manage. The thalidomide crisis in the early 1960s tarnished somewhat the credo "better living through chemistry". It also led to a profound change in the regulation of pharmaceuticals and the adoption of a regulatory strategy that emphasized the importance of comprehensive pre-market review.

The Royal Commission on New Reproductive Technologies, which tabled its report on October 30, 1993, led to an interim moratorium on problematic practices, to the tabling of Bill C-47 on June 14, 1996, seeking to prohibit practices covered by the moratorium and other ones as well, and to the release on the same day of a discussion paper on the issue of

the regulation of technologies and practices which warrant neither prohibition nor unbridled adoption.

Medical technology has never developed in a purely symmetrical fashion, where advances into the understanding of clinical conditions were accompanied by an ability to alleviate or cure a given disease. This is especially so in the case of medical genetics, for if germ line therapy is to be prohibited by law and the arrival of somatic cell therapies still somewhat distant, the ability to screen diagnose genetic disorders will greatly eclipse any means of effective intervention.

Testing raises a number of issues related to the performance of the tests themselves and to their consequences. The *sensitivity* of a test pertains to its ability to detect something, whether a particular disease or something like it, while the *specificity* of a test points with certainty to a given condition, although not necessarily in all instances. Tests which are highly sensitive yield false positives, those which are highly specific yield false negatives.

In some circumstances, such as testing donor blood, a bias towards sensitivity is desirable: the consequence of false positives means only that some safe blood, wrongly identified as infected, will not be used. In other circumstances, false positives can result in a number of ethical challenges, some of which have significant resource implications for the health system. To cite an example, the incidence of prostate cancer increases with age, and in 1989 a prostate-specific antigen test was introduced onto the Canadian market. By comparing observed versus expected rates of prostate cancer diagnoses over time, it is clear that PSA testing identified a large number of excess cases (22,500 observed minus 13,426 expected equals 9,074 excess cases in 1995).

Confirming cases is more complicated and more expensive than the cost of the test itself, which can be used by any commercial diagnostic lab in the country, and it remains for the suspect cases identified to choose between confirmatory diagnosis at a publicly funded health institution, risk medical interventions that may not be necessary and may hold the potential for an adverse outcome, or needless worrying about a disease that may never have clinical significance throughout the person's remaining years. Enter the issue of privacy and the ability of information technology to store and share medical records, and a further result may be the inability to get life insurance. Conceivably, some test outcomes could adversely affect an individual's employment prospects.

Medical technology has also made possible the prolongation of life with no real prospect for recovery. This has led to calls for assisted euthanasia and assisted suicide. A disturbing research finding that calls into question the "need" for life-ending measures bears on the prevalence of treatable clinical depression among terminally ill patients. Palliative care, pain management and the treatment of the terminally ill are all important end of life issues, and raise important questions about the values and expectations of Canadians.

"In general, the OECD countries that have contained costs better have greater government control of health spending and a larger public sector share of total health expenditures"

- World Bank (*World Development Report, 1993*)

Systemic Capacity - Health Care

The future of medicare is threatened by a number of factors, but the *Canada Health Act* is not among them. The evidence is clear that the single payer architecture of Canada's health system is an asset in terms of provinces' ability to contain costs, notwithstanding that the will to use this monopsony power only recently took hold. The evidence is equally clear on user fees: they deter people from seeking medical care, and do not discriminate between medically necessary and medically unnecessary services.

Costs are not spiralling out of control. Health expenditure data for 1994 show total public and private expenditures of \$72.5 billion (\$2,478 per capita), which represents an increase of 1 per cent in current dollars over 1993 levels. Real per capita *public* health expenditures declined for the second straight year in 1994, to slightly below 1991 levels. Real per capita *private* health expenditures continue to rise. The private share of total health spending stood at 28.2% in 1994, continuing an upward trend that began in 1976. This trend has been in evidence since long before federal EPF measures were introduced or since fiscal pressures drove provinces to cut health spending, so the trend cannot be explained solely by deliberate cost shifting.

The pressures that constitute the greatest threat to health care are those that lead towards privatization. The signs are subtle, and the very nature of the threat may sometimes be at odds with conventional wisdom:

- ❑ **An Ageing Population** places immense pressure on the health system to *change*, but the debate is often mistakenly focussed on the need for private-sector solutions.
- ❑ **Disenchantment with government**, and disbelief that government can be efficient, is constantly revealed in calls for less government and for market solutions. Public belief is such that private health care may offer superior outcomes, shorter waiting times or more "choice", but it threatens to undermine the very feature of the health system that favours cost containment, namely a public monopoly.
- ❑ **A growing ideological drift towards private health care delivery**, and confusion over what is meant by "private". There is considerable scope for provincial governments to tap private *investment* and make use of privately held services. If a specialized clinic can deliver better outcomes at lower cost than a public hospital, it makes sense for that clinic to be fully covered by provincial plans. Private *payment*, whether for publicly or privately delivered services, is a different matter. A medically necessary service is no less so when delivered by a private provider.

- ❑ ***Financial policies that favour fiscal rather than economic objectives.*** Offloading, whether deliberate or unintended, is an inevitable consequence of expenditure reduction. It invites growth in private expenditure, whether out of pocket or at the level of corporate payroll (supplementary benefits) costs. The private share of Canadian health spending is the fastest growing, and lacks the expenditure control discipline of public monopolies.

The many forces at play which favour an increasingly privatized health care system also favour a more expensive system. It has been suggested that the best reason for keeping universal health care may be that we cannot afford the costs associated with the alternative. At the present time, the challenge is to keep the system as public as possible, because once the ability to control overall costs is lost, it becomes exceedingly difficult to regain the means to exercise control.

Cutting or containing spending does not constitute health system renewal. The three aims of the federal health strategy are to preserve the principles of the *Canada Health Act*, contain total (public and private) spending, and to improve the balance between prevention and treatment. The Act contains an incentive, in the form of penalties, to abide by the principles it contains, but these principles in no way define the directions of reform. Neither do they constitute a barrier. For example, there is no bar in the Act to prevent provinces from delivering hospital services in clinics or community settings, whether publicly or privately owned; there is no bar against the use of health professionals for the delivery of medical services, and there is no limit to the “flexibility” that provinces purport to need to adapt their systems to changing population needs.

Some steps toward health system renewal have been taken, although the end results — positive or negative — remain unclear. For one, there have been major changes at the level of health system governance. Models vary, but the general trend is towards decentralization and an emphasis on priority setting at the local level. There has also been clear recognition of the importance of evidence-based decision-making, although more so in clinical than in governance or administration contexts. And there is recognition that physician remuneration, particularly in primary-care contexts, merits an overhaul.

The outcome of each of these promising trends is dependent on the outcome of other related ventures. Decentralization and local priority setting will in large measure depend upon the grade of information available to local governing boards to estimate needs and discern trends, and to identify and evaluate program delivery options and investment opportunities. The FPT Conference of Deputy Ministers of Health has identified a range of research issues requiring resolution, one of which bears on the dissemination and uptake of research outcomes. At an invitational symposium arranged earlier this year in response to Deputies’ direction, health system executives, researchers and research sponsors were challenged to consider the barriers to

dissemination and uptake, and among the key outcomes was the importance of developing and maintaining a research "receptor" capacity at decision-making loci.

The particular challenge of research use in a highly decentralized system was noted: if it has been difficult for 13 federal, provincial and territorial health departments to make effective use of research outcomes, how great is the challenge faced by one hundred-plus regional authorities?

A parallel development in the sphere of First Nations self government points towards increased complexity at the level of health system governance and service delivery. Pressures on governments have increased to resolve jurisdictional issues, which are increasingly being exacerbated by provincial uploading efforts precipitated by federal transfer payment measures. Still greater complexity lies in the high mobility of First Nations onto and away from reserves.

And, there are increased demands to expedite the processes of program transfer and co-management, regardless of the pace of self-government. Consistent with the position of the World Health Organization that communities which have control over their own services are healthier, the government is committed to program transfer. There has been insufficient time to evaluate the impact of program transfer on health status. There is, nonetheless, evidence that a number of Aboriginal communities and organizations are delivering innovative programs worthy of emulation and long term evaluation.

Consistent with the objectives of the Federal Indian Health Policy, it would be inconceivable for any program evaluation to be undertaken without considerable input from and direction by the Aboriginal clients. Equally important, however, are the fiduciary and special relationships between the federal government and Aboriginal peoples, in which all parties share a stake in successful program transfer. Although already minimal, and is expected to diminish further upon the completion of program transfer, the federal fiduciary relationship will continue into the long term.

Evaluation is key across the full spectrum of health services, but evidence-based decision-making requires appropriate bodies of evidence. There is no shortage of evidence in clinical medicine, although there are two limitations to that which is available. The clinical trials that generally precede — or ought to precede — the adoption of a new medical technology illuminate performance in terms of efficacy rather than effectiveness. That is, the research question answered is "*can* this therapy work in controlled circumstances" rather than "*does* it work in the real world". There is also a paucity of management research on the best practices of technology adoption. The tendency has been for new health technologies and systems to behave as cost drivers and add-ons, because the capacity, technologies or systems they are meant to replace is not always retired.

Part of the solution to this problem is found in the Health Services Research Fund announced in the March 6, 1996, federal Budget. This Fund, to which the federal government has unconditionally agreed to commit \$65 million over five years, will be operated by a not-for-profit public corporation rather than as a federal program, and will seek out investors and research partners who have — or ought to have — a stake in health care decision making.

Evidence in support of rational planning is only part of the solution, however. Also needed is the resolve to renew the principles of the *Canada Health Act* and the moral authority to uphold them.

"When you have shared values, the law is not that important, but when you don't have shared values, the law won't do you much good"

- A. Etzioni

Systemic Capacity - Justice and Order

The federal inmate population has been growing. While not in the same league as the US (which has an incarceration rate of 565 per 100,000), Russia (558 per 100,000) or South Africa (368 per 100,000), Canada's incarceration rate of 130 per 100,000 is fourth highest in the world, ahead of that of the UK (92 per 100,000), France (86 per 100,000) and other western European countries. The incarceration rate for Aboriginals is higher than

it is for the Canadian population as a whole.

Federal corrections costs now exceed \$1 billion per year. Even at traditional rates of growth, about 2.5% per year, anticipated incarceration rates will be unsustainable. Recent growth has been at double this rate, however, and projections point to still higher demands for corrections:

- ☐ recent and planned justice agendas;
- ☐ public fears, and associated demands to get tougher on crime and increase the severity of sentences;
- ☐ the "echo boom" which is now seeing a large cohort of young people move into the life cycle when criminal behaviours are most likely to be adopted;
- ☐ a young Aboriginal population which, if past patterns prevail, implies incarceration rates higher than the Canadian norm.

Quite apart from the question of incarceration, there are questions as to likely future social conditions which may favour crime and other forms of anti-social behaviour. A scenario-building exercise on behalf of Justice and Legal Affairs Deputies (1996) examined possible futures in the spheres of violence, polarization and fairness. With the exception of a downward trend over the past three years in rates of violent crime — which followed 15 years of increases — available research points to overall increases in rates of spousal abuse and violence, growing fears of violence, the possible emergence of a new class structure (a feature of which is a stratum of marginalized "outsiders"), widening income gaps, and a backlash against employment equity programs.

There is a growing realization that current approaches toward crime and punishment are not sustainable, in spite of what are apparently growing public demands for tougher crime-control measures. Like the health care system, many of the demands placed on the criminal justice system are the result of "upstream" factors. And like the health care system, investments in these upstream determinants are an essential part of demand reduction.

"The manner in which different countries come to different conclusions on the way to manage a health risk when they use the same scientific data, and sometimes even the same estimation of risk, often confuses the public"

- Emmanuel Somers, WHO

Systemic Capacity - Health Risk Management

A risk-averse public and high public acceptance of the legitimacy of food, health-product and environmental risk management makes health and safety regulation an easy sell. Meanwhile, the imperatives of commerce make regulations an easy target, given the cost, complexity and confusion that exist when trading partners have different regulatory standards. The NAFTA standards chapter, in

particular, invites regulatory equivalence while acknowledging parties' sovereignty in the regulatory domain.

The central issue is neither regulatory reform nor regulatory harmonization with other countries, but the effective management of risk. It is in the larger context of risk management that the merits of regulation, which is just one of the instruments available for managing risk, need to be appraised.

The theory of setting out outcome-based approaches to risk management is well-established, although there does not appear to be a long-term history of results. Addressing this deficit, and appraising the cost effectiveness of regulatory models and regulatory alternatives such as economic instruments, is essential: with shrinking budgets, the regulatory status quo is unaffordable.

There are, however, some not insignificant other challenges:

- ☐ the ethics of reversing accountability and the effects of non-regulatory approaches to risk management on Crown liability;
- ☐ overcoming the "culture" of regulation and assuring both professional staffs and the population at large that effective risk management is not being undermined;
- ☐ achieving consensus with other countries on the best practices of cost-effective risk management, when at least one among them is insistent that "equivalence" means nothing less than their way of doing business;
- ☐ managing a broader array of risks, the result of both technological advances (e.g., biotechnology) and a broader array of imported goods and technologies; and
- ☐ effectively communicating risk to the public, i.e., few things if anything are absolutely "safe" and consumers' need to make informed decisions based on their own risk tolerances.

Public concerns regarding new approaches to food processing (e.g., irradiation) and to new applications of biotechnology (e.g., trans-genic novel foods) need to be addressed. Consumer resistance is accompanied by calls for regulation if not bans, and resolving the distinct concerns of consumers and producers is possible only through the objective assessment and communication of risk.

"It takes little talent to see clearly what lies under one's nose, a good deal of it to know in which direction to point that organ"

- W.H. Auden

Pressure Points: What Else Needs to be Known

There are knowledge deficiencies in each of the foregoing trends and thematic areas. Not all relevant trends and issues are enumerated in this paper: some are outlined in other papers. Particular knowledge deficits are as follows.

Communicable Disease Risk Management

Increased immigration, tourism, commerce and business travel require an improved appreciation of the nature and severity of public health risks that travel with goods and people, and better evidence-based ways of managing these risks. Current policy instruments and associated practices, e.g., under the *Immigration Act*, *Quarantine Act*, *Importation of Human Pathogens Regulations*, offer only a limited range of risk-management options and do not necessarily direct risk-management efforts where they may be most justified.

Trade and commercial links with the US require a continental approach to the management of public health risks generally and migration risks in particular. In the absence of continued confidence by one country in the integrity of the other's ability to manage migration risk, there is the spectre of remedial border measures. Efforts towards a continental public health "shell" through a bilateral approach to risk management may nonetheless be confounded by NAFTA, where a trilateral approach would offer greater policy symmetry.

Ecological approaches to the understanding of emerging diseases and the impact of climate and other environmental factors are stymied by the "apartheid" that inhibits effective communication between relevant public health disciplines, e.g., toxicology, virology, microbiology and epidemiology. This phenomenon is not unique to Canada, but it must be overcome.

Health Care for an Ageing Population

Effective health care planning requires clear insights into — and responsiveness to — demographic and disease trends. Recent provincial measures to reduce health spending appear to have been driven more by fiscal exigencies than foresight, and the extent to which the system is capable of accommodating the needs and preferences of an ageing population remains uncertain. The consequences of a non-responsive system are increased demands for two-tier health care among those who can afford it and, if pursued, potentially diminished health status among those who cannot.

Relevance of New Technologies to New Diseases

Ideally, there is a match between the directions of medical innovation and changing population needs. The medical products industry seeks to develop products for which there are growth opportunities. Given the time that elapses following product development and before market launch, it should in theory be possible to undertake a technology forecast which would enable planners to take technological change into account in the appraisal of service delivery options.

Health System Impacts of New Technologies

For many clinical indications, treatment options are available in more than one sphere of technology. That is, a medical (pharmaceutical) treatment may be indicated as an alternative to a surgical treatment. Competition between technologies allows health decision makers to make informed technology adoption/retirement decisions on the basis of performance and cost.

The *Canada Health Act* distinguishes between in-hospital drugs, which are insured services, and outside-hospital drugs, which are not. This means that technology substitution can equate to de-insuring, if, for example, an ulcer patient who would qualify for surgery is instead treated with drugs outside of the hospital context. It means, too, that the costs of treatment may be transferred to the patient's group health program, thereby adding to payroll costs. The extent to which technological change is resulting in cost shifting is not known.

Technological change can have other implications for health system efficiency and for human resource development. For example, as and when technology permits high-resolution X rays to be transmitted digitally, there are opportunities to rationalize diagnostic imaging centres and the training of radiologists. The extent to which technology forecasts are undertaken and are factored in to health service planning is not known.

Information technology promises to have profound impacts on Canadian health care, and the *potential* exists for more efficient and effective service delivery and for improved patient outcomes. The extent to which these potentials can be realized — and obsolete or excess capacity retired — depends on how they are adopted, and the will and capacity of health system managers to make informed information technology adoption decisions is unknown.

Technological change has resulted in the ability to alter but not reverse the course of disease. This has contributed to improved patient survival but not necessarily improved quality of life. The near- and mid-term prospects for improving palliative and end-of-life care are not known, but in the absence of improvements calls by the terminally ill and their families for *Criminal Code* changes to permit assisted suicide and euthanasia will continue.

Health System Responsiveness to Major Infectious Disease Threats

Health departments' preoccupation with health care and health financing issues has diminished their appreciation of and commitment to public health. An effort is being made to rebuild the public health intelligence function, but strengthened risk *assessment* does not necessarily lead to improved risk *management*. The health care system's capacity to respond to infectious disease outbreaks has been eroded with the passing of time, and current levels of preparedness are unknown.

A contingency plan for an influenza pandemic has been developed as a *technical* document (and has been endorsed by the World Health Organization as a model for other countries). Translating it into an *operational* protocol for the management of public health emergencies requires health system responsiveness and a clear delineation of roles and responsibilities. It equally requires bi- and multi-lateral understandings with other countries on such issues as vaccine supply.

Regardless of what diseases emerge in the future, the potential is already present in Canada for tuberculosis re-activation, and for increased caseloads of drug-resistant TB. Treating a single case of drug-resistant tuberculosis has been known to cost as much as \$250,000.

Aboriginal Health Reforms

Program transfer raises a host of governance and service-delivery issues, particularly in the context of provincial decentralization measures in the health care field.

Given what is known — or thought to be known — about the mobility of Aboriginal peoples, the on/off reserve issue raises questions about the feasibility and desirability of "super portability" as a feature of health care in a self-governed regime.

The outcomes of transferred responsibility for community services remain to be evaluated and best practices identified. Critical success factors, such as human infrastructure development, should feature in evaluation strategies.

The extent to which provincial reforms in the area of health system governance can be reconciled with First Nations self government and the transfer of federal programs to Aboriginal control is not known.

The Management of Moral and Ethical Risks

Advances in the field of human genetics and agricultural biotechnology raise issues that transcend health and safety in the ordinary sense and introduce challenges for the management of moral and ethical risks.

Not known is the extent to which policy symmetry can be achieved across several areas of regulatory activity, e.g., whether practices proscribed by the current interim federal moratorium on problematic reproductive and

genetic technologies and practices, such as the creation of animal-human hybrids, can also be addressed through measures affecting the *Patent Act* and *Income Tax Act*.

Equally not known is the extent to which consumer resistance to novel foods and to new food processing practices is founded on ethical or safety-related concerns. If the issue is safety — as opposed to ethical — the challenge is *how* to communicate risks and overcome fears and promote marketplace acceptance.

Health Care Sustainability

By convention, health expenditures are viewed as consumption rather than production. Jobs and growth in the health sector are not among the objectives for health policy or for health system renewal. Consensus remains to be reached on the economic significance of health expenditure levels, and how appropriate levels of health expenditure ought to be defined.

Downloading invites uploading and offloading. The net cost to the federal treasury of transfer payment reductions, in the form of additional cost pressures born by federal programs or in the form of higher tax expenditures (e.g., attendant care, medical expenses — which appear to benefit the “rich” more so than the “sick”) need to be estimated, and the extent to which federal fiscal policies are helping to create and subsidize a two-tier health system need to be examined.

In the interest of preserving the monopsony powers inherent in a single payer health system, critical examination of the merits of “republicizing” part of the system, such as essential prescription drugs, drugs used as surgical alternatives, or a defined array of homecare services, is warranted.

Health and Well-Being and Canadian Society

Canada’s health system is widely held as a symbol of what it means to be Canadian. It is not, as is sometimes suggested, the “glue” that keeps us together but is an outward, tangible expression of the values that are held in common. Canadians in all regions of the country have assigned to the federal government the role of “guardian” of medicare. The emergence of two-tier health care will cause Canadians to reconsider the role they have assigned, and their confidence in the federal government generally to defend values held in common.

The real cost of transfer payment measures needs to be calculated in terms beyond the federal balance sheet; the real benefits of reaffirming a federal presence in health system financing also need to be estimated.

The health care and justice systems are called upon to function as society’s repair shops when other systems fail. The same sense of community that obliges a collective response to failure equally obliges a commitment to address the upstream determinants of health and well-being.

One upstream determinant is income, and Wolfson's time-series data in respect of family incomes post taxes and transfers reveal remarkable stability over time. The last data point in this series is 1993, however, before major changes were introduced in various income support programs. Key questions, therefore, bear on the stability of the observed trend, and the consequences of lost stability, in particular for families with children.

Among new immigrants, age-standardized health service utilization is below the Canadian average. After they have been here 5 - 10 years, their utilization rises to the Canadian norm. Not known are the factors that account for this phenomenon: if increased utilization implies a lower health status, what are the factors that account for this decline?

Other determinants are only tangentially related to income, and require other forms of social investment, in particular those which benefit children. These continue to be among the most promising and rewarding, whether the aim is to promote health, prevent crime, or help assure social justice.

Social and economic forces to this point have contributed to a situation where about 80% of Canada's children turn out all right. There is a strong collective interest in ensuring that future policies do not drive this percentage downward. As for the other 20%, Canada's children who by virtue of an array of factors are at risk, the key issue is whether our programming can adapt quickly enough to address emerging trends and factors, such as the upward trend in suicide rates. A quick response capacity requires an ongoing watching brief on the health of children.

Research Workplans

Extramural research into health determinants and issues related to health system renewal is funded by Health Canada's National Health Research and Development Program. Biomedical and clinical research, and increasingly research into health service and health care issues, is funded by the Medical Research Council. The new Health Services Research Fund is expected to begin operations with a strong emphasis on outcomes and best practices.

Deficits in disease surveillance and monitoring are being addressed by Health Canada's Laboratory Centre for Disease Control. Its Public Health Intelligence Network is a hub-and-spoke operation for the assembly, synthesis and sharing of intelligence from a variety of sources, including disease registries, university research, provincial public health operations, and international sources such as the US Centers for Disease Control and the World Health Organization.

Also in the Laboratory Centre for Disease Control, work continues on the aspects and attributes of communicable diseases that constitute danger to public health, and the near-term plan is to extend this work to the development of risk management models. The intended initial application

of this work is in the area of migration health, although other risk management applications are also envisaged.

The announcement in June, 1996, of centres for excellence in women's health will contribute in *part* to the knowledge deficit that currently exists in relation to women's health. Knowledge deficits will also be addressed through a concerted effort to improve the gender responsiveness of other research operations. For example, the new Health Services Research Fund will be expected to address women's issues in its coverage of health affecting treatments and interventions.

To assist in program transfer, Aboriginal self government and program evaluation, Health Canada is currently developing a First Nations Health Information System, to be implemented (eventually) in all regions and available for eventual control by First nations.

Data on health system operations is accessed via the Canadian Institute for Health Information; data on various other population health and health status measures is furnished by Statistics Canada.

In-house policy research in Health Canada will, over the near term, focus on ethical issues, genetic testing, end of life, seniors and children's issues, as well as ongoing analysis of health expenditure trends.

Current in-house work aimed at renewing the health system has to be extended to rebuilding a functioning public health system. Provinces and municipalities, and non-governmental organizations, are also implicated.

Among other recognized deficits in current research activities are futures forecasting and ecological analysis of emerging diseases and environmental trends. Both are multi-disciplinary and, potentially, multi-agency challenges.

The development of human *capacity*, as distinct from human resources, requires strengthening of existing linkages, notably those between Health, Human Resources Development and Justice, and the articulation of a research program that brings together each Department's respective expertise in a broad area of social development and social justice issues. An immediate focus would be children's issues.

Other areas requiring a cooperative approach between federal departments and agencies bear on estimates of health-related tax expenditures and the impact on these expenditures of provincial offloading and uploading.

Finally, research is needed to estimate the costs and benefits of expanded health system coverage and the merits of increased transfer payments.

Conclusions

The following key knowledge deficits have profound systemic implications:

- ☐ a major investment in the development of socio-economic measures is indicated, in the context of a framework or paradigm in which the significance of and inter-relationships between these measures are understood;
- ☐ more work is needed into the determinants of successful outcomes, to estimate the relative potency of “upstream” determinants and to inform the evaluation of expenditure management options;
- ☐ work is needed to understand the reasons underlying health system non-adaptation, and how federal transfer measures and provincial fiscal policies are contributing to a situation that favours privatization and threatens universal — and affordable — health care delivery; and
- ☐ the feasibility of a separate research agenda dealing with Canada's preparedness in various scenarios involving the emergence or re-emergence of infectious diseases.

Bibliography

Bégin, Monique. *Medicare: Canada's Right to Health*. Ottawa: Optimum Publishing, 1988.

Black, Charlyn, Roos, Noralou P., Havens, Betty and MacWilliams, Leonard Rising. Use of Physician Services by the Elderly: The Contribution of Morbidity. *Canadian Journal on Aging* 1995; 14(2): 225-245.

Decter, Michael B. *Healing Medicare: Managing Health System Change the Canadian Way*. Toronto: McGilligan Books, 1994.

Evans, Robert, G. *Strained Mercy: The Economics of Canadian Health Care*. Toronto: Butterworths, 1984

Evans, Robert G., Barer, Morris L., Hertzman, Clyde, Anderson, Geoffrey M., Pulcins, Indra R., and Lomas, Jonathan. The Long Good-Bye: The Great Transformation of the British Columbia Hospital System. *Health Services Research* October 1989; 24(4): 435-459.

Evans, Robert, G., Barer, Morris L., Marmor, Theodore R. (eds.) *Why are Some People Healthy and Others Not: The Determinants of Health of Populations* Hawthorne, New York: Aldine de Gruyter, 1994

Federal, Provincial, and Territorial Advisory Committee on Population Health. Report on the Health of Canadians. Prepared for the Meeting of Ministers of Health, September 1996

Foot, David, K. *Boom, Bust and Echo: How to Profit from the Coming Demographic Shift*. Toronto: MacFarlane, Walter and Ross, 1996

Garrett, Laurie. *The Coming Plague: Newly Emerging Diseases in a World Out of Balance*. New York: Farrar, Straus and Giroux, 1994

Health Canada. *National Health Expenditures in Canada: 1975-1997, Summary Report*. Ottawa: Minister of Supply and Services Canada, 1996.

Kraut, Alan M. *Silent Travelers: Germs, Genes, and the "Immigrant Menace"* New York: Basic Books, 1994

Lalonde, Marc. *A New Perspective on the Health of Canadians: a working document*. Ottawa: Information Canada, 1975.

Lederberg, Joshua, Shope, Robert E., Oaks, Stanley C. Jr., (eds.). *Emerging Infections: Microbial Threats to Health in the United States*. Washing, D.C.: National Academy Press, 1992.

National Crime Prevention Council, Canada. *Prevention and Children Committee: A Compendium of Approaches from Across Canada*. National Crime Prevention Council, April 1996.

National Crime Prevention Council, Canada. *Prevention and Children Committee: Offender Profiles*. National Crime Prevention Council, September 1995.

National Crime Prevention Council, Canada. *Prevention and Children Committee: Picture of Crime in Canada*, September 1995.

National Crime Prevention Council, *Prevention and Children Committee: Resiliency in Young Children*. National Crime Prevention Council, November 1995.

National Crime Prevention Council, Canada. *Prevention and Children Committee: Risks of Threats to Children*. National Crime Prevention Council, May 1996

National Crime Prevention Council, Canada. *Preventing Crime by Investing in Families: An Integrated Approach to Promote Positive Outcomes in Children*. National Crime Prevention Council, June, 1996

United Nations Development Programme. *Human Development Report 1996*. New York: Oxford University Press, 1996.

Wilkins, Kathryn. Causes of Death: How the Sexes Differ. *Canadian Social Trends*. 1996, Summer; 41: 11-17.

World Bank. *World Development Report 1993: Investing in Health*. New York: Oxford University Press, 1993.

10

Aboriginal Issues

The Challenge

When this government came to power, it set out in *Creating Opportunity* a vision for Aboriginal people within Canada. It described a future for Canada in which

- ☐ Aboriginal people enjoy a standard of living and a quality of life and opportunity equal to those of other Canadians;
- ☐ First Nation, Inuit, and Metis live self-reliantly, secure in the knowledge of who they are as unique peoples;
- ☐ all Canadians are enriched by Aboriginal cultures and are committed to the fair sharing of the potential of our nation;
- ☐ Aboriginal people have the positive option to live and work wherever they choose; and
- ☐ Aboriginal children grow up in secure families and healthy communities, with the opportunity to take their full place in Canada.

It is a vision that is still relevant.

Over the past three years, the federal government has developed a work program to achieve this vision. It is a long term strategy predicated on achieving a fundamental change in the relationship between Aboriginal people and the government. At its core is the implementation of the inherent right of self-government and the settlement of Aboriginal claims.

There are risks:

Negotiating solutions to complex issues is fraught with uncertainty. The solutions are not simple and concrete progress is often slow. Unknown "flash points" may emerge that require significant time and attention.

There are limitations:

Progress is often slow; work on most issues work requires formal, negotiated agreements with major stakeholders. The public's perception and understanding of Aboriginal conditions is starting to diverge significantly from the reality, and the public attitude towards Aboriginal people is hardening.

And there are constraints:

The fiscal environment demands continued deficit containment by the federal government. Limited resources, both human and financial, means that difficult choices need to be made.

But, there is also opportunity:

It is rooted in a rising political awareness coupled with the desire of Aboriginal people for control and decision-making, and their emerging embracing of change.

The pressure points are known. Others may emerge, but those that we need to understand and deal with now are the demographic trends of the Aboriginal population, and in particular the needs of Aboriginal youth; the health circumstances of the Aboriginal population; the social stress and conflict within Aboriginal communities, the tensions between Aboriginal and non-Aboriginal people within Canadian cities, particularly western cities; the economic profile and prospects of Aboriginal communities; and the changing relationships between governments and Aboriginal people and communities with the corresponding increase in the complexity of governance. These are the challenges that are unique to the Aboriginal environment and that must be addressed in the government's Aboriginal agenda per se.

It is important to remember that Aboriginal people do not live in a world so isolated and separate that they are not party to the forces and challenges shaping the broader Canadian agenda. Many issues that Aboriginal people are concerned with are the same issues that are facing other Canadians: how to create and sustain economic activity; how to take advantage of global and pan-national business opportunities; how to adapt to the changes in work organization and skill requirements; how to ensure proper child development and strengthen the capacity of families; how to deal with the needs of youth and the elderly; how to strengthen culture in the face of the forces of globalization, immigration and demography; how to improve individual and community health and well-being; how to deal with rural depopulation and urbanization; how to sustain our environmental capacity. These are Canadian issues. These are Aboriginal issues.

In other important ways, the Aboriginal population is out of sync with the general Canadian population. Throughout the 1960s and 1970s Canada developed a social safety and support system, and a social and economic development network (health facilities and access to health services; primary and secondary education facilities and universities, government institutions and assistance and support to economic betterment) to support the burgeoning baby-boom population. Governments invested heavily to ensure that no opportunity would be lost. Today, the baby-boom generation that benefited from this investment is struggling to pay back what it cost; to reduce funding to universities; to cut back on the social support systems; to pare down expenses in the health system; and, in general, to become more fiscally, socially and politically conservative. The reality for Aboriginal people, however, is that their baby boom is occurring 20 years after the general Canadian boom. Aboriginal people need the services and supports at a time when those supports are under attack and when the attitude and willingness of Canadians to provide support has been fundamentally altered.

Compounding the problem is the perception that Canadians have of Aboriginal people and Aboriginal conditions. The media tend to focus on disputes and confrontations: disputes over land on and off reserve; disputes over elections and financial management on reserve; and the recent actions of emerging Aboriginal gangs in western cities. For example, the dispute at Gustafsen Lake received over 1800 media clips; that at Ipperwash over 1200; Oka is still firmly entrenched in the minds of Canadians. These high profile incidents colour the public's attitude and view of Aboriginal people. In a recent poll, almost half (47%) of Canadians polled believe that the standard of living for Aboriginal people is the same or better than that of the average Canadian. Yet the living conditions and social and economic circumstances of Aboriginal people are frequently cited in international forums as a black mark on Canada's otherwise stellar position on the world human development index. As global information access and communication increases, Aboriginal people are becoming vigilant in ensuring the world community knows and understands their plight and frustrations.

The negative representations of Aboriginal people and their circumstances often mask the very real progress that Aboriginal people have made. In terms of health, living conditions, educational attainment, economic opportunities, and local governance, substantial improvements have been made. In 1977-1978, only 47 percent of on-reserve dwellings had adequate sewage disposal facilities and only 53 percent had an adequate water supply; by 1994-1995 this had risen to 88 and 95 percent respectively. The infant mortality rate of registered Indians declined from 26.5 per 1000 in 1978 to 10.9 in 1993. Between 1975-1976 and 1993-1994, the number of schools operated by First Nations increased from 53 to 412, and the number of on-reserve students who remained in school until Grade 12 increased from less than 15 percent in 1970-1971 to almost 75 percent in 1994-1995; almost 27,000 students were enrolled in post-secondary education in that year. First Nation governments administer practically all of the basic service programs (education, social

services, and the like) on which their communities depend. While much remains to be accomplished, socio-economic difficulties are being addressed in a substantive way, and progress has been made on closing the gaps between Aboriginal and general Canadian conditions.

Continuing the progress is a demanding challenge, but one that cannot be abandoned. As stated in the Red Book, dealing with Aboriginal issues is a test of our beliefs in fairness, justice, and equality of opportunity. Not dealing adequately with the issues can have serious consequences both domestically

and internationally. As history records, Aboriginal issues have the potential to seriously disrupt the government's focus and attention. Ill will, once engaged, cannot be quickly dissipated and can slow the pace of progress on many fronts.

Key Facts

- Aboriginal population projected to continue to grow at a faster rate than the non-Aboriginal population. On reserve it is projected to grow by over 50% between 1991 and 2015.
- Population is overwhelmingly young. About 57 percent of the on-reserve population is less than 25 years old, while about four percent are 65 years of age or older, compared with 35 percent and 11 percent respectively for non-Aboriginal Canadians.
- Fertility rates are two times those of non-Aboriginal Canadians; life expectancy at birth is 10 years less.
- Aboriginal population is increasingly urban. The urban Aboriginal population grew from 197 000 to 320 000 over the 1981-1991 period, a growth of 62% and is projected to grow to 457 000 by the year 2016. By comparison, the non-Aboriginal urban population grew by 11% between 1981 and 1991.
- But, the Aboriginal population is far less urban than the non-Aboriginal population. In 1991, the non-Aboriginal population was 77% urban, whereas the Aboriginal population was 44% urban.
- Off reserve, Aboriginal people tend to change dwellings and cities more than Canadians in general; those living on reserve move considerably less. The main reasons for moving off reserve were family related, access to employment, and to improve housing conditions. Men tended to cite economic reasons; women tended to cite community related or social problems. (Clatworthy, 1995)
- The future will see a shift to an older population. The proportion of young children (age 0-14) in the identity population is expected to decline from 37% in 1991 to 25% in 2016, the labour force group (age 15-64) to increase from 60% to 69%, and seniors (65+) to increase from 3% to 7%. Similar shifts occur for the projections of the overall population with aboriginal ancestry. (Norris, 1996)
- Aboriginal people living in the larger cities had much better education than their counterparts on reserve. (Clatworthy, 1995)

Demographics

Demographics are driving the financial requirements. Federal spending on Aboriginal issues is increasing, not because of new policy initiatives such as self-government, nor because of new programs and services for Aboriginal people. Spending is increasing simply because of the increase in the number of people. High rates of family formation and large family size have a direct impact on the social services budget, and in the demand for housing and associated public infrastructure such as roads and water and sewage services. These are services the federal government funds. There is obviously a direct correlation between the number of students and cost of providing educational services, be they for pupil accommodation charges for First Nations children attending schools off reserve, or for teachers and school buildings on reserve. The federal government has a legal obligation to ensure that Aboriginal children on reserve have access to education. Our budgets have been experiencing the effect of this obligation. The continuing growth in the Aboriginal population means that we will continue to have pressure placed on our financial resources.

Demographics are clearly linked to the well-publicized statistics on Aboriginal suicide, violence, interaction with the justice system, and death by accident. The over-representation of youth in the Aboriginal population, exacerbated by poor living conditions and lack of hope and opportunity, is a driving factor in the high level of

health and social pathologies among Aboriginal people. Generally speaking, youth, Aboriginal and non-Aboriginal, are much more at risk than other groups. In health terms, they are most at risk of death by accident, and most of risk of suicide. Youth are also much more at risk of substance abuse than are other groups. Similarly, in terms of interaction with the justice system, the youth population is the one most at risk.

Demographics are a major contributor to social stress and tension. The natural propensity of youth to challenge authority, to challenge government, to challenge their leaders is a day-to-day reality for First Nations. Aboriginal leaders must deal with demands for immediate action, solutions and results while facing the reality that it takes time to achieve negotiated solutions to complex problems rooted in history, that improving conditions is a long-term prospect, that the health profile of a large and diverse group does not change over night.

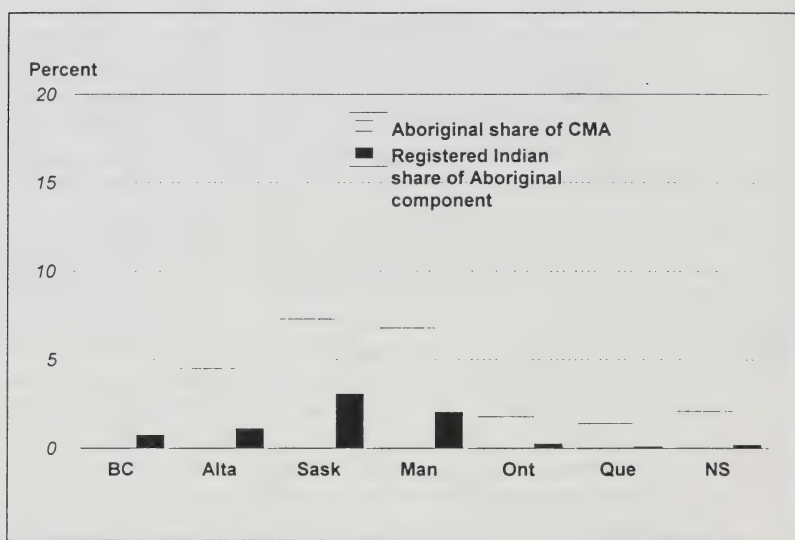
The absolute number of Aboriginal people and the population growth rate (the natural rate, and the "legal" rate increases through C-31) is also a challenge. In terms of housing, for example, First Nations communities must cope with a demand that far exceeds supply. Families must deal with cramped and overcrowded living conditions. Will the rate of mobility on and off reserve increase? Already, cities must deal with an increasing Aboriginal population showing tendencies to ghettoize. The most immediate and visible consequence to date is the appearance of Aboriginal youth gangs in some cities. Are we seeing the emergence of a permanent underclass, or a population in transition?

The demographic realities of the here and now are also the realities of the immediate future. The number of Aboriginal youth between 0-14 is greater than the number currently between 15 and 24. Studies on children and youth demonstrate that investment at an early age is crucial for economic and social well-being later on. The other reality is that children and youth issues are ever-increasingly linked to job market issues: parental employment to meet the financial requirements of raising families; adequate child care and support systems; appropriate education and training for the new and emerging labour markets, and economic development and business growth at a pace that can accommodate the influx of Aboriginal job seekers.

A particular demographic issue is the increasing presence of Aboriginal people in larger urban areas. As focal points for regional trade, communication, manufacturing, transportation and pecuniary links, large cities provide individuals with an opportunity to match their skills to a broad range of employment possibilities. In Canada, the lure of large urban centres is readily affirmed; in 1991, the urban/rural divide in Canada was among the most extreme in the world, with almost 80 percent of the population characterised as urban. For Aboriginal people, the lure of better prospects in an urban setting exerts a strong influence on people of working age. While many Aboriginal families have been thoroughly urbanized for several generations, a stream of young Aboriginal persons regularly face the prospect of migrating to large

urban centres in the search for a better life. For many Aboriginal people, the reality is that they arrive in urban places with a set of cultural sensibilities that are not always amenable to city life.

As the accompanying table indicates, Census Metropolitan Areas (CMAs) with an Aboriginal presence exceeding one percent of the urban population were found in seven provinces. The provinces of Manitoba and Saskatchewan reported Aboriginal populations that exceeded five percent of the urban populace in 1991. Between 1981 and 1991, the urban Aboriginal population grew from 197,000 to 320,000 — a growth rate of 62 percent, compared to the non-Aboriginal population urban growth rate of 11 percent. It should be noted that natural increase (the difference between births and deaths), rather than impact of migration, is accounting for a significant proportion of Aboriginal growth in urban areas. Other factors affecting the growth rates of



urban Aboriginal populations are the reinstatement of over 100,000 Indians under the 1985 Bill C-31 amendments to the Indian Act, and how people self-identify with their Aboriginality on census tallies. Registered Indians represent a sizable share of the urban Aboriginal population, although in British Columbia, Nova Scotia and Quebec, the Registered Indian share of the urban Aboriginal population between census years 1986 and 1991 actually declined.

Economic Potential

Aboriginal people are poor. They are less likely to participate in the labour force; when they participate, they are more than twice as likely to be unemployed. Those employed earn, on average, only half the average earnings of other Canadians. In cities across the country, and particularly in the west, we are seeing the possibility of a permanent Aboriginal urban

underclass. An underclass that has historically been faced with prejudice and discrimination, that has had less education and fewer skills that are in demand, and that has had less opportunity to climb out of the situation.

The majority of Aboriginal communities are rural and remote. Local markets, if they exist, are small, parochial and difficult to access. Major markets are distant, unknown or not well understood, with systems of economic activity and ways of doing business that may be quite foreign to budding entrepreneurs. Will remote communities be capable of using new technologies to overcome these barriers?

An additional constraint to be faced is that for many Aboriginal people, land and resources are fixed and static quantities. The land base of First Nations is enmeshed in a legal and political system that makes its expansion difficult. Land is not usually held in fee simple and cannot be mortgaged or pledged, making access to capital more difficult. With a large and growing population on a fixed land and resource base, issues of sustainability are always near the surface. Gaining some access to provincial crown land off-reserve resources through negotiated agreements with provincial governments has a great deal of potential. Major strides have already been made and the potential great

	Source of Income (%)							
	Not in Labour Force	Unemployment Rate (%)	Employment Income	Government Income	Other Income	Without Income	Av. Income	<Grade 9 Education (%)
Non-Aboriginal Canadians	31.9	9.9	65.1	15.5	10.7	8.7	20,264	13.8
All Aboriginal Canadians	35.7	19.4	59	24.3	5.1	11.7	14,198	18.4
Registered Indians Off Reserve	42.7	25.1	50.7	30.1	4	15.2	12,551	19.4
Registered Indians On Reserve	53.2	31	38.7	40.1	10.9	10.2	8,812	37.2
Inuit	43.5	23.8	57.3	24.9	1.4	16.5	12,661	47.4
Métis	40.9	25.3	52.9	29.2	3	14.9	12,685	24.8

for further co-operative arrangements in the natural resource industry. Building on natural advantages in the resource management field is generally viewed as a vehicle for constructive economic improvement.

Settling Aboriginal rights issues also has economic potential. Achieving claims settlements does two things: by clarifying rights and obligations, it provides the certainty which is essential to creating a positive climate for economic development; it encourages and stimulates the investment necessary to take advantage of resource opportunities, build businesses and create jobs.

Secondly, where there is a cash component to claims settlement, this provides the seed capital from which Aboriginal communities can develop a business portfolio and a community economic development strategy.

There is also a close relationship between creating wealth and distributing wealth in the Aboriginal context. In the first instance there is the relationship between Aboriginal businesses and Aboriginal employment. A reasonable hypothesis is that Aboriginal businesses have a greater propensity to employ Aboriginal people. To the extent that this occurs, it assists in taking up the demand for jobs created by the demographic profile discussed above. The other aspect, however, relates to *community* economic development rather than individual businesses. Aboriginal communities, unlike most non-Aboriginal communities that simply try to create a nurturing environment for business, tend to have a hands-on approach that involves the creation of community-owned businesses. Again, this links to Aboriginal employment for these businesses, but it also links to the ability of successful Aboriginal community-owned business to use their proceeds to support programs and services delivered by their governments.

Health

By nearly every measure, the health status of Aboriginal people is significantly lower than that of their fellow Canadians. Of particular concern is the dramatic upward trend of some diseases such as diabetes and the increasing prevalence of infectious and communicable diseases such as tuberculosis and HIV which may soon reach epidemic proportions. In addition, there is increasing anecdotal evidence that suicide and solvent abuse are rooted in sexual abuse and family violence which are almost systemic in many communities.

Lifestyle factors are major determinants of health status. Most chronic diseases, disabilities and premature deaths have multifactorial causes involving not only non-modifiable biological factors, but also potentially modifiable behavioural factors such as smoking, alcohol and drug consumption, nutrition, sedentary lifestyle, excessive weight and the absence of preventive women's health practices. Because habits can be influenced by promotional and modified by preventive activities, significant gains in longevity and quality of life can be achieved if such activities are carried out. Understanding the incidence and prevalence of these and other factors in the Aboriginal context is an important first step in disease prevention.

More than thirty per cent of the Aboriginal population is below the age of 15. This youthfulness will be felt very significantly in the health sphere. There will be a need to emphasize programs for child, youth and maternal health at a time when the rest of Canada is placing a heavy emphasis on problems of aging.

Aboriginal people are increasingly turning to traditional medicine, either as an alternative to western medicine or as an adjunct. Governments and health professionals are beginning to recognize the need for policies to address the issues raised by traditional medicine, particularly the interface between the

two medical disciplines. Issues such as licensing, standard setting, fee schedules and liability will have to be resolved jointly by governments, professional health associations and Aboriginal people.

Social Stress and Conflict

Aboriginal people and First Nations communities are experiencing high levels of social stress and conflict. Anger, fear, frustration, and despair are the everyday realities for far too many people. Youth suicide; young offenders; family breakdown and family violence; high rates of illness and infectious disease are well beyond acceptable levels. The rate of incarceration in federal and provincial institutions is 5 to 6 times that of the general population. We are witnessing an increasing number of internal First Nations political

disputes, and we are seeing the emergence of youth gangs challenging authority both on and off reserve. Aboriginal women disproportionately leaving communities to avoid violence and find opportunities. The potential for major incidents that feed on themselves and garner national attention is not far from the surface in many locations.

There is an increasing challenge to the Aboriginal leadership and historical systems of authority and decision-making. This is occurring at a time when traditional systems are already challenged internally to meet the demands for greater accountability, more transparency and openness, and to meet the needs of particular constituencies, such as women and youth.

It can be taken as a given that such a state is unacceptable in its own right. The social stress and conflict is morally, ethically and politically unacceptable. There is also a Catch-22 element to such an environment. Breaking the cycle of degenerative behaviour and despair requires many elements working in concert: economic development, suitable living conditions, an embracing of change. It means doing the sorts of things it is difficult to do when in distress. We need to know what intermediate steps must be taken to produce concrete, short term results if the long-term vision is not to be lost. If problems are not addressed, it will be more and more difficult for First Nations governments to maintain

social cohesion in communities, and there could be deteriorating relations with provinces and adjoining communities.

The Symptoms

Social Conditions:

- Large numbers of young single mothers, and high rates of children in care
- Illiteracy twice the national average
- Incarceration rates 5 to 6 times national average
- Substance abuse a serious problem
- Urban crime: 4 ½ times non-Aboriginal crime rate in Calgary; 12 times the rate in Regina and Saskatoon
- In provincial correctional institutions in the Prairies, Aboriginal people constitute 40%-50% of admissions (they represent only 12% of pop.)

Economic Conditions

- Income one-half to one-third less than non-Aboriginal Canadian
- Unemployment at 25%, more than twice overall Canadian level
- Youth unemployment in some communities reaching 85%

Health Status

- Life expectancy 10 years than Canadian average
- Infant mortality higher than average
- Greater prevalence of infectious disease, tuberculosis, shigellosis, HIV
- Youth suicides 6-8 times the Canadian average

Political Conditions:

- An increasing number of internal First Nations electoral and governance disputes
- Emergence of youth gangs challenging authority both on and in cities, particularly western cities
- Aboriginal women disproportionately leaving communities to avoid personal and family violence

In terms of Aboriginal issues, however, the public's perception and understanding of Aboriginal conditions is starting to diverge significantly from the reality, and the public attitude towards Aboriginal people is hardening. Canadians are extremely sensitive to "special treatment" for Aboriginal people. One of the challenges for the research agenda will be to find ways in which Aboriginal program and policy responses can be best fitted into the larger government response in areas where there is a convergence of needs (e.g.,

jobs, youth, dealing with poverty). As Aboriginal people are increasingly taking control over their own policy development, a challenge will be to establish cooperative research partnerships among First Nations, the federal and other governments, universities and other institutions, and the private sector.

Concerns of Canadians

- A majority of Canadians (51%) believe the standard of living of Aboriginal people is worse than the Canadian average; however this is a major drop from two years ago when 69% of Canadians thought the Aboriginal situation was worse.
- As a corollary, 47% of Canadians now believe that the standard of living for Aboriginal people is the same or better than that of the average Canadian (up from only 30% two years ago).
- Fewer than half of Canadians polled (45%) disagree with the statement that "most of the problems of Aboriginal people are brought on themselves".
- A majority of Canadians (54%) believe Aboriginal people are being unreasonable in terms of their current land claims.

Governance

Over the medium term, we will be dealing with a previously unmatched level of complexity. The implementation of the inherent right of self-government will create a multiplicity of systems and a patchwork of governance regimes across the country, with some First Nations having fully implemented comprehensive self-government, others having some sectoral self-government arrangements (e.g., education, justice), and still others continue to function under the *Indian Act*.

Off reserve, the situation will be similar, with Aboriginal groups in some cities currently more organized than others and in a better position to make self-government arrangements, while in other cities no such organization exists. In the North, the stated preference of the federal government is to implement self-government via public government arrangements.

First Nations and urban Aboriginal groups will also need to develop new functional and practical relationships with provincial governments and local municipalities. The relationships carry with them historical baggage regarding the provincial views on federal roles and obligations for First Nations. One of the major challenges will be moving beyond the federal-provincial debate over jurisdiction and responsibility. The reality is that the interests of Aboriginal people can only be served by cooperative arrangements focused on results.

Key Facts

- 608 First Nations; 50 Inuit communities
- Over 80% of DIAND's programs have been devolved and are administered by First Nations
- Other federal departments also devolving to First Nations and Aboriginal groups (e.g., Health, HRDC)
- New financial transfer arrangements (block funding) being developed; pilot projects now underway
- Nearly 90 self-government negotiating tables, representing over 350 First Nations

Another governance challenge will be the actual harmonization of programs and services and the application of laws and regulations. At the very least, harmonization must be at a level such that it is neither an impediment to the administration of government, nor an impediment to economic development opportunities. At the other end, overlap and duplication are not sustainable. In a time of constrained resources and increasing demand, research must focus on models and means of working co-operatively.

Communities and governments need a sound and sustainable base for revenue generation and taxation; individuals and communities cannot remain dependent forever on transfer payments; governments need to be financially capable of delivering the programs and services that people require. Research needs to focus on practical arrangements to achieve these objectives.

Research Needs and Work Plan

Research Needs

There are two streams to the research plan: the statistical and the inferential. The statistical side is relatively straight-forward. It is information gathering and analysis, and getting a better understanding of the population profile and the trends for the future — for example, more comprehensive community health profiles, a better picture of mobility patterns on and off reserves and to urban areas, a better picture of the number and demographic breakdown of people who come into contact with the justice system. One of the challenges for this type of research will be setting up, in partnership with First Nations and Aboriginal groups, data collection systems. The research must be comprehensive vertically (i.e., a more comprehensive profile within particular communities) and horizontally (in terms of coverage across the country).

The more demanding avenue of inquiry is the inferential research — determining what story the statistical information is telling, discovering why it is so, what the implications are, and what the options for dealing with the problem are. For example, if demographics is a driving force, what does this mean in terms of the demand for new or larger schools, what does it mean in terms of the number of houses that will be required, and what does that mean in terms of the new roads required, as well as water and sewage treatment facilities? What is required to prepare the youthful population for the transition to the working age category; what sorts of skills and training will be required, how can they be best acquired? One of the objectives of this line of research is to examine the policy and program changes that are needed to meet the challenge in meaningful and financially sustainable ways. There is a need, for example, to research options for program redesign to focus on more efficient and effective delivery (e.g., block funding); a need to examine how to moderate service expectations, and a review of eligibility and other program standards.

A particular feature of the research plan is that it needs to be cross-sectoral. It will need to be structured so as to integrate the social, the economic and the political. All of these issues in the Aboriginal context are interlinked, and will be best researched in a comprehensive fashion. It is important to keep in mind that the research need not be conducted by the federal government. In fact, increasing the capacity and role of First Nations and Aboriginal groups in conducting and utilizing quantitative and qualitative research in addressing policy issues is an important consideration.

Research Plan

Demographic

DIAND is commencing a four-year program of research on Indian demography and the implications of demographic trends. This research will add to knowledge on the following topics:

- ☐ the gap between community needs and available budget
- ☐ age structure, ethnic composition, class structure, and appropriate program mix
- ☐ reserve versus off reserve vis à vis different needs driven by different demographic structures
- ☐ on and off reserve migration patterns, the reasons for migration and the reasons for staying
- ☐ gap implications in context of social trends and related socio-economic dynamics

What are the migration patterns of Aboriginal youth and what are the reasons for migration;

What keeps Aboriginal youth in school? What makes them leave?

Labour and Economics

What is the wealth potential of First Nations given structural impediments such as geographical location, access to markets, access to capital, history of participation (or lack thereof) in industrial sectors or international trade?

What are the advantages and limitations of community ownership, particularly in terms of capital re-investment flows and wealth re-distribution within and between communities?

What is the profile of the Aboriginal labour force (skill mix, mobility, and employment patterns, etc) and how does it match the skill set of expected labour demands?

How best can governments assist Aboriginal entrepreneurs, and First Nations, as well as rural and remote communities in general, to take advantage of the knowledge-based economy.

What should the role of government be vis-a-vis Aboriginal economic development — should it nurture and support, subsidize to encourage start-ups, and/or protect infant-industries and business?

How to merge the needs of local economic development and traditional economic pursuits with the global economy, knowledge-based industries, and international trade and investment?

What are the legal and structural impediments to business creation, and what can be done to overcome them? What are the appropriate models, means and approaches to working co-operatively with provincial governments, local municipalities and the private sector?

Governance

What is the nature of the evolving fiduciary obligations with First Nations? What will be the residual role for the federal government after implementation of the inherent right of self-government?

What is the capacity for First Nation/Aboriginal government revenue generation (taxation and non-taxation based models), and what is its relationship to assuming an increasing share of the cost of services?

What are the levels of provincial financial transfers into reserves, and what is and could be the relationship to federal-provincial-territorial transfers?

What are appropriate models and approaches to dispute resolution, particularly within communities?

The possible applicability of “equalization” principles and parameters to First Nation communities.

Health and Social

What is the impact of community control on health status?

Health status data: Health Canada is currently developing a First Nations Health Information System which will eventually be implemented in all regions and available for control by First Nations. The systems is to address gaps in the accuracy, consistency and completeness of knowledge, and the current lack of health statistics by racial category.

What is the interaction of the determinants of health?

What are the features of models of successful community-based intervention programs?

How to improve mental health and social cohesion?

What is the incidence and patterns of crime in First Nations communities?

What is the extent of flexibility in the justice system to accommodate alternative approaches such as diversion and other alternatives to incarceration?

Conclusions

When one looks at the pressure points on the Aboriginal agenda, it would be easy to conclude that the situation is desperate, if not hopeless. The situation, however, is not totally bleak; progress is being made; education levels are increasing; new businesses are being formed; housing and living conditions are improving; health and safety issues are being addressed; programs are being put in place to provide hope and opportunity for Aboriginal youth; and, most importantly, Aboriginal people are gaining control over their own lives. They are designing the solutions to their own problems.

One of the most hopeful signs is the confluence of philosophy and objectives. No longer are we at odds over basic approaches and objectives. There is a common understanding between the federal government and Aboriginal people that rights issues need to be addressed, that self-government and jurisdiction is the right approach, and that Aboriginal values, traditions and customs must be maintained and respected. There is also agreement that living conditions need to improve, that jobs and economic opportunities need to be created and nurtured, and that the best and longest-lasting solutions will come from Aboriginal people themselves.

There is also an emerging consensus on the approach to solutions — the need to achieve negotiated solutions, the need to work in partnership with First Nations and other Aboriginal people off reserve; the need to involve the provinces and municipal governments and nurture new relationships with these governments and with non-Aboriginal Canadians; the need to create a governance system that is harmonized with surrounding jurisdictions, that avoids overlap and duplication, and that is financially sustainable over the long term. And, there is recognition of the need to accomplish these objectives in a manner that respects federal obligations and is respectful of Aboriginal cultures and values.

One of the major challenges of the research agenda is the need to find linkages:

- ☐ between traditional pursuits and a modern economy;
- ☐ between Aboriginal healing and traditional medicine and a scientific health system;
- ☐ between Aboriginal justice and the mainstream justice and correctional system;
- ☐ between historical systems of governance and the Euro-Canadian democratic system; and
- ☐ between Aboriginal ethnicity and a diverse, multi-cultural society.

Aboriginal issues cut across the three themes that have been identified by the Policy Research Committee — jobs and growth, social cohesion and equity, and sustainability. Aboriginal issues also cut across the boundaries of federal departments and mandates. There is no department in the federal government that does not have an interest and a role in Aboriginal issues. The research agendas of these departments must be cognizant of this reality. Conversely, research on Aboriginal issues should be cognizant of what can be gained by research in other fields. A cooperative and integrated approach is required.

Attached are two annexes that present areas of “non-Aboriginal” research of several federal departments that have an impact on aboriginal issues, and a listing of Aboriginal-specific research under way or planned for the near future by DIAND.

Annex I

“Non-Aboriginal” Research With an Impact on Aboriginal Issues

Adding Aboriginal-specific questions to research in areas not specifically Aboriginal would add vital knowledge to the understanding of the Aboriginal issues and pressure points identified above. Some examples of issue areas and related Aboriginal-specific questions are listed below.

Demography

The changing requirements for investment in children and families (HRDC)

In the context of Aboriginal families in various settings (urban, reserve) what factors and interplay between factors result in healthy childhood development and unhealthy development? Are there ways that governments could and should intervene to promote healthy Aboriginal childhood development?

Disadvantaged youth (HRDC)

What future challenges will face disadvantaged out-of-school Aboriginal youth in the transitions from youth to adulthood, from school to successful entry to the work world? Are there different challenges for urban Aboriginal youth (for example, members of Aboriginal urban gangs) compared with those living in rural and remote communities?

Labour and Economics

The changing nature of employment (HRDC)

What skills, attitudes and behaviours will be required for Aboriginal people to find employment in the emerging economy? Will the new economy manifest itself in different ways in urban and rural and remote places?

The emerging information/knowledge-based economy (IC)

For which sectors of the economy and in what ways does information technology have the power to effectively narrow or eliminate the relative economic locational disadvantage of rural and remote places where many Aboriginal people live? How can information technology and ways of working over long distances be used to support Aboriginality controlled research/policy research?

The state of Canada's urban centres (WED)

To what degree and in what ways are relatively young, growing, disadvantaged urban Aboriginal populations acting as a brake to the role of major urban places as drivers of the national economy places (particularly in western Canada)? Is the relatively young Aboriginal population a potential asset to urban places given the expected departure from the work place of large numbers of “baby boomers” over the next generation?

Earnings and income (STC)

Are emerging, new dynamics of poverty the same for Aboriginal people as they are for other Canadians? Are the causes of poverty different in different geographical settings (urban areas, on reserves, off reserves but in rural and remote areas)? Are these dynamics resulting in new types of underclasses?

Governance

Changing role of government and the sense of nationhood (CH)

What is the most appropriate balance of responsibilities between different levels of government? How can restructuring the balance help Aboriginal peoples find themselves within the Canadian sense of nationhood and identity? How can emerging relationships be managed with greater coherence?

Implications for the changing role of government on Canada's social union (CIC)

What are the implications to Aboriginal people and Aboriginal governments of on-going devolution across levels of government? What is the potential role of the voluntary sector in First Nations communities, other rural and remote Aboriginal communities and Aboriginal populations in urban areas?

Health and Social

Social safety net (STC)

What will be the impacts of reductions in unemployment insurance and social assistance to Aboriginal populations? Will there be impacts of particular concern in communities with high levels of dependency?

The evolution of the social union (HRDC)

How should Aboriginal well-being be defined and measured? Are there significant variations (positive or negative) in the level of social outcomes produced by Canada's social programs for Aboriginal populations in comparison with mainstream populations?

Annex II

Research Under Way or Planned at DIAND on Aboriginal Issues

DIAND is addressing its departmental information needs through a variety of activities including data development, data quality enhancement, statistical publications, program evaluation research and policy research. DIAND's two-year program of current and planned policy research contributes directly to shedding light on many of the questions listed above. This research includes work on:

Economic

- ☐ Indigenous knowledge and intellectual property
- ☐ Linkages between social assistance and economic development
- ☐ Linkages between education and employment
- ☐ Future employment prospects for Aboriginal youth
- ☐ Resource co-management: principles and approaches
- ☐ International Aboriginal economic development
- ☐ Traditional harvesting and community well-being
- ☐ Economic successes of Aboriginal women: reasons and support required
- ☐ Sustainable communities
- ☐ Impact of post-secondary education on employment and income

Governance

- ☐ Revenue generation (taxation and non-taxation based) for First Nation governments
- ☐ Cost-sharing and financial transfer mechanisms
- ☐ Costs of micro governments
- ☐ First Nations effective practices for strengthening communities and governance
- ☐ Impact of inherent right on intergovernmental affairs
- ☐ Forms of partnership and organizational arrangements for effective/efficient service delivery
- ☐ Oral traditions
- ☐ Provincial legislation for education

Demographic and Social

- ☐ Youth: statistical profile
- ☐ Implications of First Nations demography
- ☐ On:off reserve migration
- ☐ Family formation on reserve
- ☐ Adult care and services for people with disabilities
- ☐ Transfer dependency and associated social security arrangements and options
- ☐ Socio-economic trends and patterns
- ☐ Distance learning

Identity, Culture and Values

Description of the Issue

Over the next decade, Canadians will face hard questions about the future of their country, particularly about the key characteristics that define Canada. The Canadian dream in the 19th century was defined by a railroad that forged east-west linkages between far-flung, former colonies. In the 20th century, emerging from the difficult years of the Depression and the two World Wars, Canadians developed a set of policies and programs that reinforced their commitment to equal opportunity and the collective well-being of all citizens. Significant policies which typify this "Canadian way" include universal access to education, health care, national pension and old age security plans; equalization; a national redistributive unemployment insurance program; and a national communications system (through the *Broadcasting Act* and the balanced regulation of telecommunications).

Past investments in social capital made Canada "number one" in the world in 1992, 1995, and 1996, according to the United Nation's Human Development Index (HDI). The Index, based on life expectancy, educational attainment, gender development and real GDP, among other measures, showed Canada in first place in terms of human development. This ranking is not the product of happy accident: Canadians working together have created the society that is considered the best in the world.

A country, like any other societal institution, is held together by the will and hard work of the people who live in it. Values and culture are at the heart of a nation's identity. Without this "glue" a country becomes less cohesive, and its other societal goals can become more difficult to achieve. Today, as we approach the 21st century, our sense of common purpose is being eroded by a number of trends, some within the federal government's control, others outside it. Our research indicates that these trends, if not recognized and dealt with over the next few years, could fragment and polarize our society, put individuals and communities under pressure and undermine the consensus that has underpinned social cohesion in the country for most of the past century.

The definition of "social cohesion" used in this paper is based on one recently suggested by Judith Maxwell, President of the Canadian Policy Research Network, in an address given at the University of Alberta in January 1996. In this address, entitled "Social Dimensions of Economic Growth", Maxwell identifies three elements of social cohesion. Briefly, they are:

- ☐ building shared values and communities of interpretation
- ☐ reducing disparities in wealth and income in a diverse society
- ☐ engaging in a common enterprise as members of the same community.

In Maxwell's view, social cohesion is derived from investments in human and social capital, which include not only social programs, but also traditions of civic engagement, such as voting, newspaper readership and membership in community associations. Social capital is the foundation for economic success because it puts in place the trust and reciprocity required to generate wealth. When social capital and, hence, social cohesion is eroded and when large segments of the population are marginalized by unemployment and poverty, the impacts are not only social. In a knowledge-based economy, the very basis of longer-term competitiveness -- the economy's human capital -- is also compromised. Maxwell also draws a clear distinction between short-term cost cutting and long-run competitiveness. Marginalized workers for example, are unable to invest adequately in education for their families, thus perpetuating lower productivity over time. Similarly, quality of life and absence of social strife are important determinants of business investment which is a key element in future productivity.

An international poll conducted in 1992 revealed that people see Canada as a land of opportunity, where tolerance and acceptance of diversity are the norm, and the environment and the health care system are valued (Angus Reid Group, 1992). However, despite glowing reviews from abroad, Canadians are becoming more worried about their future and the future of

Canada is a society in transition, the dimensions of which are not yet fully understood. A major issue is the degree to which these changes will act as a force of cohesion or contribute to increased polarization. Canada's success in the next millennium will hinge largely on the degree to which it can nurture, over the long term, a set of shared values and symbols. Moreover, the globalization of cultural expression will require that we continue to build common "communities of interpretation". This implies improved access to Canadian cultural content as an essential means of bridging linguistic, regional and cultural differences and promoting common understanding.

their children in a rapidly changing global environment. The following section outlines the pressures that are being placed on each of the elements of our definition of social cohesion. This analysis will be supported with greater detail in the section on "State of Knowledge: What we do know and what we need to know". It should be noted that this paper does not deal with the most obvious impediments to the construction of a common purpose, the national unity question and its implications for governance, which is being

addressed by other groups within the federal government.

Building shared values and communities of interpretation

New factors, social, economic and technological, are beginning to impinge on the vital notion of "shared opportunities", an underlying factor that shapes Canada's identity and supports social cohesion. These forces -- frequently termed "post-modern" -- consist of a cluster of trends fuelled by globalization and light-speed communications. A post-modern environment is characterized by non-ideological and often fragmentary views, diversity in perspective and experience, abandonment of hierarchy, disillusionment with society's institutions, and an emphasis on personal fulfilment, sometimes to the detriment of a civic perspective.

Emerging symbols and polarized values

Social and economic changes are leading Canadians to question the forces and institutions that have traditionally served as instruments of cohesion in Canada. Traditional symbols are becoming less relevant to many Canadians in the face of fundamental changes, both internal and external to Canada. Moreover, no clear consensus currently exists on new instruments of cohesion that might sustain the Canadian community in the next century.

Richard Gwyn (1996) discusses the "unbearable lightness of being Canadian" and examines the "slow unravelling of the national fabric". He argues that no national community is more vulnerable to global change than Canada because of a fragile identity based not on ethnicity but largely on the "commitment to egalitarianism and on the ideals of civility and tolerance". Peter Newman (1995) documents the transition within the Canadian political culture from deference to authority to egalitarian revolution -- a transformation that he says is driven by a growing belief in the equality of Canadians. An offshoot of this trend has been a decline in legitimacy of the traditional touchstones of Canadian identity, such as the monarchy, with little to replace them.

National polls throughout the 1990s support this thesis. In 1990, Generations Research concluded that "there are no strong symbols (with the possible exception of the maple leaf) which are acceptable to all ethnic

groups". More recent work by the Environics 3SC Monitor in 1994 and 1995 concluded that only two of 23 symbols resonated with all segments of the Canadian population: Medicare and the natural environment. Similarly, an Environics Focus Canada Report in 1996 reported that the health care system is now the most compelling symbol of Canada, followed by the *Charter of Rights and Freedoms*, the flag, national parks and the national anthem. Clearly, the points of commonality are limited.

Shifts in values may be at the root of our disagreement about symbols. There is no question that Canadians feel that a shared value system is important and that some of the current public anxiety and cynicism can be traced to changes in these values. (Angus Reid Report 1996, Environics Research Group Focus Canada 1994, Goldfarb Report 1996). Since 1983, the Environics Research Group has been tracking changing values in Canada. This work suggests that Canadians overall are becoming more individualistic, and that this trend troubles many of them. Even more troubling is that Ekos Research, in its Rethinking Government project, found a growing split between the decision making elite in Canada, who tend to emphasize economic-materialistic values, and the general public, who consider humanistic and idealistic values (freedom, a clean environment, a healthy population, integrity, individual human rights, safety and security) much more important.

Cultural expression and identity in a global environment

Globalization of trade and markets, coupled with the increasing power and scope of communications technologies, are creating a more "open society" where money, people, cultures and ideas move freely across national borders. Continental pressures are intensifying to harmonize Canada's domestic economic, social, environmental and cultural policies with those of our largest trading partner, the United States. These forces could diminish our ability, in the future, to express what is unique about our culture.

Social cohesion is promoted through shared information and cultural expression. Global communications networks and information technologies are, however, putting pressure on traditional notions of the nation state and of national sovereignty, particularly in the areas of cultural expression and social equity. English-speaking Canada already leads the Western world in consuming more foreign than domestic entertainment (Jeffrey, 1995). Current media concentration within large (usually foreign) conglomerates could further narrow the avenues through which Canadians have traditionally expressed and reinforced their sense of identity. The story of the new media has yet to be written, but if past difficulties in maintaining "Canadian voices" on television, radio, books, sound recordings and magazines are any indication, this struggle will continue on new ground.

The erosion of consensus about the touchstones of Canadian identity can be traced, in part, to the increasing fragmentation of the Canadian mass

media. The "mass market" media of the past few decades is being replaced by tailored and targeted programming and content. Citizens no longer receive a single or limited range of messages over uniform channels of distribution. Instead, they are being bombarded with 50 television channels (soon to become 500), innumerable specialty magazines and millions of Internet messages. On the one hand, as the "information universe" expands, Canadians may in the future have a more limited knowledge, understanding, and appreciation of their collective history, (particularly across the linguistic and ethnocultural divides) and of the fundamental realities of Canadian society. On the other hand, global communications and expanded global travel may provide us with unprecedented opportunities to share our values and our unique perspective with each other and the rest of the world.

Despite increasing access to content from multiple sources, polling data indicates that the availability of high-quality Canadian cultural products is important to Canadians (Goldfarb Report, 1996). Polling data from 1987 to the present consistently shows that over 60% of Canadians believe our culture and identity should be reflected by our cultural products (Goldfarb 1995), and a majority of Canadians (52%) say that the nation's culture should be protected from foreign influence (Environics 1995).

Reducing disparities in wealth and income in a diverse society

Changing patterns of income distribution and increasing diversity have profound implications for social and economic development. There is evidence of increasing disparities in wealth generally and even greater marginalization for certain groups such as the Aboriginal population and the information poor. At the same time, however, a diverse society may also be a source of competitive advantage and can contribute to the creation of a more cohesive, vibrant and inclusive society.

Economic anxieties and income distribution

Fully 44% of Canadians think there is a good chance that they could lose their jobs, and 81% say that they are really worried that Canada is becoming a divided society of "haves" and "have nots". When asked to predict the unemployment rate in 10 years, Canadians believe that it will remain at current levels (close to 10%) well into the next century. Concerns about job loss are not limited to the young and those in traditionally disadvantaged

regions, such as the Atlantic provinces. Insecurities are now highest among those with incomes in the \$40,000 to \$60,000 range, lending some credence to theories about the "hollowing out" of the middle class. (Rethinking Government, April 1996).

Income statistics support this growing unease. While the total Canadian population grew by just over 6% between 1989 and 1993, the low income population grew by nearly 36%. A new under-class, excluded from the knowledge economy may be developing, which could reinforce existing fault lines in Canadian society based on gender, language, ethnicity, age, social class and region.

Increasing diversity

The increasingly diverse nature of the country is making Canadians think more profoundly about the implications for their collective identity. Public opinion research in May 1996 by Ekos Research Associates revealed that while most Canadians agree that cultural diversity makes Canada a stronger country, this vision of Canada must also include a commitment to an overall Canadian identity.

Immigrants contribute to Canada's economy and society, bringing new skills and business linkages, new consumers and taxpayers and an enriched cultural life. Yet, immigration can also imply additional challenges that go beyond settlement services and language training to involve health, employment and community services, social assistance, education, policing and justice.

Annual immigration levels to Canada have risen from 85,000 in 1985 to about 200,000 in 1995. Canada receives proportionately more immigrants per capita than most other countries, with the dominant sources shifting from Europe to Asia over the past 40 years, and the country will continue to become more ethnically diverse. Changing demographics, resulting in part from shifts in traditional source countries and patterns of intermarriage between different cultural groups, will have an impact on current notions of what constitutes the mainstream. In 1991, 42% of the Canadian population reported origins other than British or French (Canadian Heritage, 1994). By 2006, projections indicate that 51% of the population will report at least one origin other than British or French. Fifteen per cent will be members of a visible minority (Nordicity Group, 1996). The majority of this population will be concentrated in major urban centres, primarily Toronto, Montreal and Vancouver.

While this diversity enriches the country, the dramatic change in demographics could contribute to racial tensions, particularly in the large cities. The increasing incidence of hate crimes and hate propaganda (Department of Justice, 1995, Roberts, 1995, B'nai Brith, 1995) indicates that our image of Canada as a tolerant and inclusive society is coming under growing pressure, and social cohesion in the coming decade will depend on the degree to which a diverse population either polarizes or coalesces.

Another factor affecting cohesion is the growing urban Aboriginal population. According to the 1991 Census, over 800,000 of Canada's 1.1 million Aboriginal people lived off-reserve (unpublished 1991 Census of Canada tabulations), with heavy concentrations in cities such as Winnipeg, Regina and Thunder Bay. Research studies (for example, by the Royal Commission on Aboriginal Peoples, the Department of Health and the Federal Law Reform Commission) indicate that Aboriginal peoples in urban communities are experiencing serious social problems, such as family violence, substance abuse and youth crime. Canada's urban Aboriginal population is young, highly mobile, and difficult to capture in Census data. This group suffers from unemployment and illiteracy rates

that are twice the national average, and suicide rates among the young that are four to five times those of other Canadians. Clearly, there is a high risk that Aboriginal peoples will experience continuing marginalization.

As we move into the next century, intergenerational inequities may also begin to contribute to social tensions, as Canada's huge baby boom population will begin to retire, redefining the socio-economic equilibrium in ways we do not yet fully understand. A recent OECD examination of pressures on social cohesion noted that there is growing evidence of disaffection among the young in some communities with large proportions of wealthy retired people (*The OECD Observer*, August-September 1994). Seniors, many of whom will have accumulated considerable wealth by 2005, may increasingly be viewed as a generationally divisive influence and, as the OECD phrases it, "an economically selfish voting block", concerned about their own pensions and personal security, but disengaged from the communities in which they live.

Engaging in a common enterprise as members of the same community

The creation of social capital has become a more complex process in the Information Society, due to growing interaction among diverse communities. On the one hand, new divisions between the information rich and the information poor could develop, resulting in increasing fragmentation and multiple loyalties. On the other hand, active engagement in the Canadian community could improve understanding of the history and institutions that have shaped our society and develop a new sense of common purpose and commitment to our future together.

Civic participation and the Information Society

The full economic and social potential of the Information Society can only be realized when the products and services provided by the technology are used by the public, institutions and corporations. For this to happen, Canadians must have access to these technologies, and a diversity of content must be encouraged to allow Canadians to see themselves in this new world.

In a world enriched by global information flow, Canada's position as a world leader in communications technology should afford all Canadians the opportunity to share the benefits of global markets. However, at the same time, further proliferation of computer technology could exacerbate existing economic hardships, inviting more job displacements and further corporate restructuring, and creating a new system of "haves and have nots" based on differential access to information technology and to information resources (Drucker, 1993; Handy, 1990; Negroponte, 1995; Rifkin, 1995).

Pessimism about social and economic prospects, coupled with the increasingly global perspective fostered by advanced communications technologies, has led several important North American commentators to sound the alarm about a perceived general decline in civic participation (Putnam, 1994, Rifkin, 1995, Drucker, 1994). They argue that the ties that bind people together in civil society are slowly unravelling. People will spend less time and effort in building connections to their neighbours, will not often discuss their commonalities, and will become increasingly isolated from their communities.

Jeremy Rifkin's book, *The End of Work*, discusses at length the future of community and voluntary organizations, considered to be key vehicles for fostering participation and identity. Rifkin refers to the combined assets they offer as the new "social economy" and proposes massive growth in the "third sector" through the subsidization of work for the unemployed and underemployed to enable them to undertake community development activities. However, the "third sector" is currently stretched close to its limit, and there are no guarantees that it will be able to assume many of the responsibilities being off-loaded by governments.

Community activity and nation building require that people give freely of their time, energy, enthusiasm and money. The trend for the 1990's, which looks as if it will hold through the millennium, is that both time and money will be in very short supply. Free-time or leisure time can be devoted to the consumption of cultural products, such as books, movies, artistic and musical productions, television programs or to voluntarism. The time crunch being experienced by the middle class and the lack of free time available for leisure use and for community building will therefore continue to affect both the cultural and voluntary sectors.

Fragmenting and multiple loyalties

Canadian society has always been characterized by fragmented or multiple loyalties, particularly at the regional level. This tendency appears to be increasing, with new and overlapping communities of interest not only being formed on the basis of political affiliations with provinces, regions or cities, but also around human dimensions such as family, ethnicity, language, gender, sexual orientation, or professional and leisure interests, such as the environment or the Internet. This in itself would not be a problem for Canada's future if these loyalties were embedded in at least a basic understanding of our roots and our commonalities. Unfortunately, as the *Citizens'Forum on Canada's Future* noted in 1991, "Canada is dying of ignorance". It concluded:

We do not know enough about ourselves. Without a radically fresh approach to improving what we know about each other, our lack of knowledge of the basic realities of this country will continue to cripple efforts at accommodation.

State of Knowledge - What we do know and what we need to know

Because of the multi-faceted nature of the *problématique* outlined above and the difficulties of organizing such a large body of material, each of the subject areas will be treated as a separate unit for purposes of describing the existing knowledge base and research gaps. The sections on the **Research Plan** and on the **Conclusions** to be drawn from this analysis will attempt to identify the linkages among the various subject areas and with the other "challenge" areas forming part of this initiative.

Building shared values and communities of interpretation

What we know

Emerging symbols and polarized values

The Department of Canadian Heritage and its founding departments have commissioned research on national symbols dating back at least to 1990. A focus group study prepared by Generations Research identified a significant disconnect between the established symbolic order and a diverse contemporary Canadian society (1990). It concluded that "there are no strong symbols (with the possible exception of the maple leaf) which are acceptable to all ethnic groups". A subsequent study (Tepper 1993) demonstrated that the Canadian symbolic order has evolved throughout its history to accommodate a changing society and reiterated the need for a more inclusive approach to Canadian symbols. Another analysis, conducted by the Environics Research Group in 1994 and 1995 using their 3SC Monitor, divided 23 items identified as symbols of Canadian Identity into six groups: 1) symbols of institutional culture; 2) symbols of political culture; 3) language symbols; 4) popular culture symbols; 5) freedom and equality symbols and 6) symbols of the monarchy. Key findings were that only two of the 23 symbols -- Medicare and the natural environment -- found support among all segments of the Canadian population. Other symbols such as language, native people and the monarchy, actually represented points of disagreement.

Environics studies demonstrate that certain national symbols such as the monarchy have been declining in importance (Environics, 1994 and 1996). However, little analytical attention has been paid to the subject. Adsett (1996) is an exception in this regard. Her work suggests that this decline in the importance of state symbols also translates into a fragmentation of Canadian identity into a number of perspectives -- a state oriented allegiance perspective, an experiential perspective and a "rights" perspective -- and that these perspectives are to a certain extent competing ones. Both Adsett and Saraq of Environics Research suggest that more experiential symbols, or symbols which represent Canada in the present tense might have more resonance with some Canadians. The Department has also undertaken international comparative research to assess how other countries have responded to the challenge of adapting the national symbolic order to a diverse population and contemporary realities (Butt, 1996).

Table 1 shows that formal symbols of the Canadian state are not considered very important in Quebec, while the *Charter*, health care system and bilingualism are (Environics, 1994 and 1996, Adsett, 1996). However, there has been little research on what alternative symbols, in addition to these, might serve both Quebec and the rest of Canada.

In 1991, the Government of Canada published a paper on "Shared Values: The Canadian Identity", summarizing the results of the Citizens' Forum on Canada's Future. It identified the following shared values: freedom, democracy, the rule of law, federalism, a sense of justice, caring,

Table 1 - Symbols of Canadian Identity
Very Important April 1996

	Quebec	Rest of Canada
Health care system	70	86
Charter of Rights and Freedom	56	70
Bilingualism	54	28
National parks	46	68
Historic sites	43	63
Olympic athletes	38	48
Canadian flag	36	73
Canadian literature and music	36	49
National anthem	34	70
Canadian theatre and films	29	39
CBC	28	32
Multiculturalism	26	40
RCMP	23	63
Hockey	17	34
The Queen	4	18

Source: Environics Research

compassion for others, responsibility to the greater community and to other individuals, equality, community rights, individual rights, diversity, inclusiveness and a supportive society. Since then, a number of "values" studies have been conducted by federal government departments, including Canadian Heritage, Citizenship and Immigration, Health and Environment.

In 1995, Canadian Policy Research Networks published a report called "Exploring Canadian Values: Foundations for Well-Being" which summarized the results of their research into "values that Canadians uphold with respect to health, education and social supports". Their research suggests that Canadian values in this arena have not changed dramatically over time but the expression of these values has changed. The core Canadian values which they identified included self-reliance, compassion leading to collective responsibility, investment

(especially in children as the future generation), democracy, freedom, equality and fiscal responsibility. Also in 1995, a study prepared for the Quebec government on the dominant values of Quebecers suggested that Quebec society is traditional and conformist in nature, placing an emphasis on values associated with family, security and work (Guité, 1995).

Cultural expression and identity in a global environment

The important unifying role of culture and cultural industries in creating a sense of community in a global information age has been recognized internationally by the European Commission (Luc Soete, Building the European Information society for Us All - First Reflections of the High Level Group of Experts, 1996) and the United States (J. Paul Getty Trust, Humanities and Arts on the Information Highways, 1994). Australia has also acknowledged the potential of culture to stimulate the economy, create jobs, and unify Australian society. (Commonwealth of Australia, Creative Nation, 1994). However, many countries share Canada's unease about the loss of a national presence on their movie and television screens. According to the European Media Information Bureau, the American share of the European movie market grew from 56% in 1985 to 76% in 1995 (*This Week in Germany*, February 23, 1996). Even in traditionally strong domestic markets, such as France, American films have increased their market share from 36% in 1984 to 57% in 1994 (Antoine, 1995).

The new information communications technologies will change the way people interact, understand, consume, and produce cultural products and services. These new technologies are interactive rather than one way, and provide each consumer with the opportunity to also act as a producer defining (and perhaps sharing) a unique cultural product. This increased flexibility in the production of cultural content creates the potential, according to the European Commission to:

- ☐ reduce the cost of preserving diversity (cultural and linguistic)
- ☐ reduce the push towards cultural standardization
- ☐ develop new programs of cultural development
- ☐ reinforce local cultures and build bridges
- ☐ increase accessibility of and reduce the strain on natural and built heritage through virtual tourism.

The long-term impact of new information technologies on cultural identity may not yet be known, but it would appear that the traditional mass media -- radio, network television, newspapers and magazines -- are in danger of losing salience among Canadians, who are turning increasingly to the 500 channel universe, digital media like CD-ROMs, and the Internet. Such media target small "tribes" of like-minded individuals, and the mass media could find their constituencies limited to those at the lower end of the socio-economic scale, who feel excluded from and resistant to the new technologies. (Environics 3SC Monitor, 1995). For example, the viewership of pay and specialty channels in 1995 in English Canada is a relatively elite audience with higher education and income than the Canadian average (Kiefl, 1996). Concerns over the social and economic implications of such fragmentation have been repeatedly raised in reports prepared for the government, including The Future of Canadian Programming and the Role of Private Television: Keeping Canada on the Information Highway (Working Group on Canadian Programming and Private Television, March 1995), and Building the Information Society: Moving Canada into the 21st Century (Government of Canada, 1996).

Cultural participation and exchange, in its broadest sense, are important elements of Canadian identity and cohesion. For example, participation in sport helps to foster exchanges among people of diverse backgrounds, forges community bonds, and provides a venue to showcase the multiple facets of Canadian culture. Beyond individual participation, sport contributes to unity and pride as Canadian athletes perform and act as ambassadors for Canada in international competitions (Sport Canada Plan, January 1996). Certainly, polling results seem to indicate that most Canadians support this view. Competition by Canadian athletes at the Olympic Games was seen by 38% of Canadians as "very important" and 43% as "somewhat important" to Canadian identity (Canada: A Socio-Economic Profile, Environics Research Group, 1996).

Travel in Canada, to the extent that it enhances knowledge and understanding of Canada and brings Canadians together, also contributes to a more cohesive society. To date, however, while there is considerable data on travel patterns in Canada, the value of this travel in terms of building Canadian identity and cohesiveness is not well understood. It is a truism to say that travel is broadening and makes the traveller more appreciative of the place visited. International games, cultural exchanges, and even boy scout jamborees are typically justified in this way. If this is correct, then Canadians are growing proportionally less appreciative of the more distant parts of their country. Overall pleasure travel in Canada increased from 44 million person trips in 1980 to 56 million person trips in 1994, for an annual average growth rate of 3%. In that same time period, however, the proportion of those trips which were interprovincial fell from about 12% to 9.5%, or a drop of one-fifth. The only exception was Quebec, where the proportion of interprovincial trips taken by Quebec residents remained more or less constant at about 8%. (Special tabulations, Statistics Canada's Canadian Travel Surveys from 1980 to 1994).

What needs to be known

The degree to which a set of shared Canadian values can be maintained within a post-modern environment is currently unknown. Research is required on:

- ☐ the impact of cultural diversity on the development of Canadian identity, on public attitudes, on patterns of intergroup relations and social cohesion, and on institutional policies and programs;
- ☐ the need to adapt existing symbols to a changing society including, perhaps, a broader array of national symbols with an experiential dimension (CBC, health care, environmentalism, national parks);
- ☐ the apparent widening gulf between elite / public values and "boomer / post-"boomer" values, and the implications of these trends for social cohesion.

More focused research on the evolving structure, performance and role of the cultural content producing sector in an information-based economy will be required to facilitate federal policy and decision making on both the social and economic fronts. Some specific research areas requiring attention include:

- ☐ the societal impact of technology on patterns of distribution and consumption of Canadian cultural products, including the implications of media concentration and vertical integration on such patterns;
- ☐ the interaction between new technologies and the production and preservation of Canadian cultural heritage;

- ☐ the need for new support mechanisms or regulations to promote Canadian cultural expression and community development in an open society;
- ☐ the role of other forms of cultural expression and exchange (the arts, sport, the natural and built heritage, domestic travel) in promoting social cohesion in Canada.

Reducing disparities in wealth and income in a diverse society

What we know

Economic anxieties, income distribution and their impact on social cohesion

One in three Canadians say they would not be able to pay their bills for a period longer than a month if they were to lose their source of income (Goldfarb, 1996). The percentage of households in Canada receiving social assistance rose from 7% to almost 11% between 1984 and 1993. The poverty rate for lone female parents was 60% in 1993 and that of their children was close to 65%. (Justice and Legal Affairs Environmental Scanning Working Group.). Data from the Survey of Consumer Finance show that the average earnings of Canadian youth have declined substantially between 1981 and 1993, with the gap between 17-24 year-olds and other age groups increasing. Other evidence indicates that the income gap between occupational groups both within and across firms increased between 1985 and 1991 (*The Canadian Workplace in Transition*, 1994).

Evidence suggests that access to the shrinking number of well-paying jobs may also be difficult for members of visible minorities. Even among the Canadian-born, certain groups, such as black and Aboriginal males, received 17% and 23% less than their British-origin counterparts with similar levels of schooling and work experience. (Pendakur and Pendakur, 1996). A recent study of 1981 and 1991 census microdata for the Toronto labour force found stratification along ethnic and nationality lines, with immigrants from the U.S., U.K. and some European countries having the greatest advantages in the economic domains studied, while individuals born in Poland, Latin America and the Caribbean had the greatest disadvantages. (Mata, 1996).

There is some evidence to suggest that marginalization of workers from other cultures may hinder international competitiveness. A recent Conference Board study concluded that Canada's ethnocultural groups represent a significant asset to Canadian business. CEOs interviewed for various Conference Board research initiatives recognize that these groups possess specific expertise, such as language skills, knowledge of foreign cultures and business practices and natural trade links with overseas markets, which can be used effectively to capture market share in emerging economies and "new" Canadian markets (Taylor, 1995).

Marginalization, alienation and disaffection can be linked to suicide, family violence, criminal behaviour and hate group activity. Individuals can be marginalized for a variety of reasons, including exclusion based on language, race, ethnicity, culture or sexual orientation. No matter what the reason, one of the effects of marginalization can be feelings of disenfranchisement, powerlessness, resentment and frustration, creating conditions conducive to hostility and crime. A recent Justice Department paper makes a strong connection between the unmet needs of poor children and many pressing social ills, such as unemployment, physical and mental illness, illiteracy and criminal behaviour (Strategic Issues and the Canadian Justice System, 1995). Another paper prepared for the Department of Justice indicated that 61% of all hate incidents were directed against racial minorities, 23% against religious minorities, 11% against gays and lesbians and 5% against other ethnic minorities (Roberts, 1995).

Social cohesion has a much more unambiguous effect on productivity and economic growth through its interaction with equality and income distribution. (Maxwell, 1996; OECD, 1996). A considerable literature has examined the links between poverty and health, crime and inner city decay (Osberg, 1990). Dealing with these problems diverts resources from productive investment to what Osberg has termed "defensive necessities": the law enforcement system, the health and social services system. In addition, have-nots, even those who are not living below the poverty level or have not dropped out, are not contributing fully to the economy, owing to lack of training, poor health or other social dysfunctions. This breakdown in social cohesion can be seen most readily at a macroeconomic level in the decline in employment participation rates.

Perhaps even more important than those on the bottom who have lost faith in the system are those in the high income levels who have ceased to care about society -- in other words, those who have dropped out from the top. The decreasing social cohesiveness in the higher income group manifests itself in such things as calls for decreased transfer payments for the poor, user-pay regimes for government services, or reductions in social services which they can afford to buy privately but which the poor cannot. The political agenda supported by such social attitudes increases economic inequality, which has been shown to be damaging to economic growth rates (Osberg, 1995; Persson and Tabellini, 1994; Bénabou, 1996), mainly because low incomes leave families unable to invest adequately in their children's education, contributing to the creation of an economically dysfunctional class.

More needs to be done to explore the linkages between income disparities, marginalization and falling government revenues. The underground economy has commercial and social roots, people who are unemployed or underemployed, who are underpaid or who feel overtaxed will lose faith in the system and begin to drop out or look for other ways to survive. There has always been an underground economy in Canada, but over the past twenty years it appears to have grown. In April 1994 Statistics

Canada estimated the size of the underground economy at \$18.5 billion or 2.7% of the economy, but subsequent estimates have suggested that it may be as large as \$36 billion or 5% of the economy.

There may also be complex interlinkages between security, social cohesion, healthy communities and a strong, competitive economy, as was pointed out by the Task Force on the Greater Toronto Area in a recently completed report, which concluded that "quality of life" -- including such things as the effective rule of law, civility and the cosmopolitanism of Canadian society -- was a major competitive advantage in attracting foreign investment and determining corporate location. Corporate Resources Group of Geneva, an international personnel consulting company, recently measured quality of life in 118 cities worldwide and ranked four Canadian cities (Vancouver, Toronto, Montreal and Calgary) in the top 12, a performance unequalled by any other nation. The top U.S. city, Boston, placed 30th. (World Competitiveness Report, 1995).

Increasing diversity

During the 1950s, 80 to 90% of all immigrants were from European countries. By 1994, Europe accounted for just 17% of immigrants, while Asia's share had risen to 57%. The majority of these new citizens settle in Canada's largest urban centres. In 1991, 34% of all immigrants lived in Toronto, 12% in Vancouver and 11% in Montreal. The intensity of these changes in demographics in our major cities may be gauged by the fact that the 65,000 immigrants arriving in Toronto in 1994 spoke among them 122 different mother tongues (Immigration Statistics, 1994).

By way of contrast, smaller communities remain much more ethnically homogenous. In 1991, 9.4% of the Canadian population were members of a visible minority, 92% of whom lived in large urban centres. For example, the 1991 Census showed that visible minorities made up 26% of Toronto's population, 24% of Vancouver's and 11% of Montreal's, but only 1% of St. John's, 1% of Trois Rivières' and 2% of Sudbury's population (1991 Census, special tabulations).

Linguistically, in 1991, 15% of Canadians reported a non-official language as mother tongue. Almost 400,000 persons reported being unable to speak either of the official languages. In all, about 5 million people or about 18% of the population can conduct a conversation in a language other than English or French (Harrison and Marmen, 1994). Trends indicate, however, that Canada's official language minorities may be losing ground. For example, in 1951, 7.3% of the population outside Quebec reported French as their mother tongue. By 1991, this proportion had dropped to 4.8%. At the same time, the number of Canadians able to speak both official languages, particularly among the young, has increased substantially.

Just over 1 million Canadians reported Aboriginal origins in the 1991 Census, up sharply from about 700,000 in 1986. This population is growing at twice the rate of the general population and is expected to increase by

almost 50% to 1.6 million persons by 2016 (Norris, 1995). A little more than 30% of the Aboriginal population is under the age of 15. In 1995, 55% of the on-reserve population was under 25, as compared to about 33% of the general Canadian population (Department of Indian Affairs and Northern Development). In effect, the Aboriginal population is experiencing a baby boom twenty or more years after the rest of Canada.

Urbanization of the Aboriginal peoples also appears to be occurring with a similar lag, although this is proving difficult to track. The 1991 Census indicated that the Aboriginal populations of Winnipeg, Regina and Saskatoon were 7% and growing. There are disproportionate levels of violence and crime in Aboriginal communities, and Aboriginal incarceration rates are five to six times higher than those of the general population. The Department of Justice and the former Law Reform Commission have conducted a number of studies on the plight of Aboriginal youths, Aboriginal crime in major urban centres and the functioning of the criminal justice system vis-à-vis this population and have concluded that there is a need to focus more resources on these issues.

An aging population is expected to have profound effects on the coordination, delivery and sustainability of public programs. By 2006, 13% of the Canadian population will be over the age of 65 (12% in 1996) and only 18% will be under 15 years of age (20% in 1996). The median age, which stands at 35 years today, will rise to 38 in 2006 (Norris, 1995). Average incomes have risen among older people and the poverty rate has dropped. This trend is expected to continue, since paid employment is currently heavily concentrated in the middle-age group -- the dreaded "baby boomers" -- who will be retiring in massive numbers over the coming decade. A society with healthier and wealthier seniors has many more options in adjusting to change. However, questions of intergenerational equity may arise if means cannot be found to engage seniors in community development and nation building.

What we need to know

The set of issues surrounding income disparities and diversity will be the among the most complex and difficult challenges for public policy over the next decade. Major research areas to be addressed include:

- ☐ the social and economic situation of women and children;
- ☐ equity in the justice system for Aboriginal peoples, immigrant and visible minority groups, women, disabled people, gays and lesbians, including possible innovative applications of information technologies to improve the accessibility and efficiency of the justice system;
- ☐ crime prevention focused on social development and community-based measures and prevention of hate crime and hate-motivated violence;

- ☐ the impact of "quality of life" factors on international competitiveness;
- ☐ the adaptation of immigrants in the labour force, substitution of labour, the social welfare costs of immigration and management of risks and opportunities associated with international population movements;
- ☐ the social and economic integration of immigrants from a long term perspective, including work on the personal and economic costs of discrimination (such as labour market discrimination and housing discrimination) and on the economic benefits of language knowledge (domestically and internationally);
- ☐ the socio-economic implications of aging, with particular reference to social cohesion, ethnic stratification and intergenerational conflict;
- ☐ the relationship between issues such as crime, victimization, substance abuse and ethnicity;
- ☐ the implications of increasing Aboriginal fertility and changing migration patterns for Canadian social policy.

Engagement in a common enterprise as members of the same community

What we know

Civic participation and the Information Society

Evidence suggests that a new knowledge elite is being created, rooted in income derived from the knowledge based industries of hardware, software and content development, and fuelled by new disparities based on privileged access to information technology and enriched information resources. (Reich, 1992). Canada's installed communications infrastructure is world renowned and the penetration of certain basic information tools such as micro-computers and modems into households and businesses of all sizes has been rapid. In many cases, the Canadian penetration rates for new technology match or exceed those reported for the U.S. (Dickenson, 1996).

The telecommunications and computer services sector and the arts and culture sector (which is the main source for new content) underpin the Information Society in Canada. The output of these combined sectors has been estimated as 10% of the total Canadian economy, employing nearly 1.5 million people (Durand, 1996). Employment in these sectors is intensely skill driven, and access to many of these jobs depends on advanced training in various applications of technology (OECD 1995).

High personal or family income levels are generally the key determining factor that shapes access by citizens to new technology and information highway resources. The basic profile of users is steady across several

different studies, and Canada's "wired" are mostly young, male, affluent, with lots of education, living in big cities, consumed with the work ethic, and strong believers in the benefits of applied technology (Angus Reid Group, 1995; Anderson Consulting, 1995; Neilson Media Research, 1995; Nordicity Group, 1996). Access to the new information tools appears to be more limited for members of smaller communities and rural areas; for those living in particular regions of Canada; and for certain groups, such as for Francophones and minority communities (Niece, 1996).

Since income currently plays the biggest part in determining connections to the information infrastructure, considerable concern is being expressed about the need to encourage "universal access" to the benefits of new technology and to the information highway through the promotion of public access networks. This movement has as its goal the progressive levelling of information access for all citizens (Clement and Shade, 1996). Other options proposed include defining a bundle of "basic and essential" information services which would be available through wide subscription, and the provision of a "public lane" within the overall development of the evolving information highway (Building the Information Society: Moving Canada into the 21st Century, 1996).

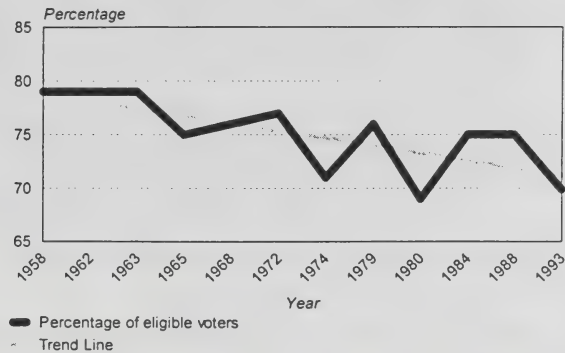
Many Canadians are worried that their skills in using new technology are not sufficiently up to date and these worries seem to cut right across all demographic groups. (Insight Canada Research, 1996). Even those who own computers express these worries, and the impression is that many Canadians feel they are being outpaced by technological developments. In an information economy, it is already known that a highly literate and skilled work force is a key determinant of competitiveness. However, researchers believe that the concept of adult basic skills now needs to be adapted and broadened to include new extensions into the digital domain (OECD, 1992 and Lanham, 1995).

Recent evidence from a Canadian time use survey has drawn sharp attention to another barrier to participation in the 1990's -- "the time crunch" and the effects it is having on families (As Time Goes By ... Time Use by Canadians, Statistics Canada, 1994).

Stress and conflict are being widely experienced in the cross-interference of work and family life. Working parents feel guilty that they do not spend enough time with their children, and those with living parents feel guilty about not spending enough time with them. In addition, time off work is becoming the new work place incentive, compared to more money which dominated for decades. This is particularly so for higher income earners and for those with children (Goldfarb Report, 1996). Both the "time crunch" and shrinking incomes may be behind decreasing family expenditures on cultural products, which fell from \$957 to \$839 (in constant 1982 dollars) between 1990 and 1992 (Family Expenditure in Canada).

Graph 1

Voter Turn Out For Federal Elections



Source: Elections Canada, 1996

For many people, work-time now dominates and excludes much else. For some, work-time dominates because of the demands of multiple low wage jobs, as is the case for the working poor. For others, work-time dominates because of professional requirements, and while the wages are high, free-time is scarce. The unemployed or the marginally employed may have more time to devote to community pursuits, but not the means to spend on community development. In either case, scarcity of free-time or financial resources to pursue activity reduces the potential engagement with community organizations.

Despite these trends, engagement in the community has a durable history in Canada. The tendency to build up community resources has been particularly evident in Canada's patterns of urban ethnic community development, which are unusually "complete" in the range of institutions and services they offer group members (Breton, in *Thirty Years After the Vertical Mosaic*, in press). Whether this community engagement is being translated into broad support for the democratic process at the national level is unclear, but data from Elections Canada indicate that voter turnout in federal elections has been steadily declining over the past 40 years or so, down from almost 80% in 1958 to less than 70% in the 1993 federal election. (See Graph 1). While the cause of this decline, which follows U.S. trends, has not been identified, it could be symptomatic of the erosion of social capital identified by a number of commentators and reinforced by polling data showing trust of the federal government "mired at very low levels" (*Rethinking Government*, 1995).

The voluntary or "third sector" is frequently cited as an alternative mechanism to foster a sense of community and social cohesion in Canada. Unfortunately, this sector may increasingly lack the human and financial resources to deal with the range of complex social issues likely to come its

way. The 1987 Statistics Canada Survey of Volunteer Activity indicated that the middle-aged with middle-incomes spent the greatest number of hours volunteering. The 1995 Goldfarb Report showed a decline in volunteering between 1985 and 1995, although this trend appears to have bottomed out in 1990. A downward trend is also evident in charitable donations among the middle-income group. In 1990, the percentage of Canadians claiming the charitable income tax deduction peaked at 29.5% and has been declining ever since. In the 1984-93 period, Canadians making \$50,000 and less have consistently accounted for the highest percentage of charitable donations, but this has been steadily declining as well, from 73% in the mid-1980s to 55% in 1993, suggesting that middle-class giving as well as middle-class time is being squeezed. (Special tabulations, Revenue Canada charitable donations statistics).

Fragmenting and multiple loyalties

One of the characteristics of a "post-modern consciousness" is the growing tendency of people in Western societies to adopt multiple social identities - to consider themselves, for example, Buddhists in one context, Ontarians in another, Canadians in yet another -- and to feel comfortable with overlapping boundaries between nationality, religion, gender, ethnicity, age and class. Increasingly, it is those who wish to preserve the integrity of single identities who feel under siege, but as one researcher concluded, "... multiple identities must inevitably be accepted, and honored. We are not likely to have any nations that are not pluralistic -- especially when so many of the people in them are pluralistic all by themselves." (Anderson, 1990).

There is evidence that Canadian society is becoming increasingly fragmented along identity lines. For example, a segmentation analysis of the Canadian population over the age of 50 prepared by Environics in 1995 suggests that "older Canadians are characterized by a degree of social cohesion, conformity and consensus that is breaking down among those born after the baby-boom generation". Environics has also detected a growing trend among individual Canadians to identify with social, environmental and community concerns and not just nationality. Another survey by Angus Reid in 1996 showed that Atlantic Canadians, while expressing profound attachment to Canada, identify more with their province than with their country.

This fragmentation is, in itself, not threatening, but may pose challenges for the Canadian state when accompanied by limited knowledge and understanding among Canadians of their history and institutions and of their fellow Canadians, particularly across linguistic divides. Active engagement in Canadian society may also be hampered by limited opportunities to learn about the rights and responsibilities of Canadian citizenship. (Goldfarb 1991; Cameron 1996, Ekos, 1994; Report of the Senate Standing Committee on Citizenship 1993; Gouvernement du Québec 1996).

What needs to be known

Major potential research areas regarding access to communications technologies include:

- ☐ Levels and types of participation by Canadians on the information highway, including comparative research on Canada's digital literacy skills base as compared to other countries;
- ☐ Changes in all industries as a result of the increasing use of communications technologies and a clearer picture of the types of employment being generated in particular sectors, such as the content development industries.

Major potential research areas related to time use and civic participation include:

- ☐ trends in time allocated to work, time given to leisure, including cultural expression and consumption, and time given to community based activity;
- ☐ ways that the social economy can become better prepared for the enhanced roles and responsibilities it may be required to meet over the next decade, including the tools required by the voluntary sector to take on new or increased responsibilities for community development and civic participation;
- ☐ how the changing role of government will affect the accountability of voluntary organizations that may be assuming responsibility for the administration or delivery of federally-funded community development programming.

Research is also required on:

- ☐ the interrelation between multiple loyalties (such as ethnic identity, linguistic identity, and generational identity), the implications for Canadian identity overall, and how cohesion can be fostered in this environment;
- ☐ the state of learning about Canada in general and Canadian history and civic education in particular, analysis of the long-term measures, both in Canada and in other jurisdictions, to promote self-knowledge and mutual understanding among citizens of diverse backgrounds.

Research Plans

Obviously, considerable research has already been carried out on all the trends outlined in this paper. Canadian identity, culture and values have been extensively studied and commented upon by the academic and journalistic communities, as well as by several of the provincial governments. A rich and varied literature on diversity and changing

demographics, social cohesion, community development and participation also exists within the federal government, as well as within the academic community. Finally, the impact of globalization and the new information technologies on society and the economy has inspired a huge body of literature, much of it from off-shore sources, but also from the Canadian research community. The principal difficulty is that much of this research was commissioned at different times by a number of federal government departments and has never been examined as a whole. Synthesis of relevant research in all these areas might be a useful starting point in developing a more global understanding of the factors sustaining social cohesion.

Arguments could be made to support the interlinkage of Canadian identity, social cohesion, culture and values with all of the other research clusters identified in this exercise. However, constraints on time and on the human capacity to draw meaningful conclusions from too complicated a model have encouraged us to limit the analysis of workplan synergies to a few key departments -- Canadian Heritage, Citizenship and Immigration, Human Resources Development, Justice and Industry Canada.

Canadian Heritage is primarily concerned about the need to develop shared myths, symbols and common purposes that can help Canadians to bridge the barriers of language, culture, gender and generation. Although its mandate is to reinforce Canadian identity, the outcome of its preoccupation with the promotion and articulation Canadian values and the strength or weakness of the Canadian state has both a social and an economic impact. Its research plans, therefore, focus on the following areas:

- ☐ measures to balance traditional approaches to cultural affirmation and development with the new potential for cultural expression implied by global markets
- ☐ the contributions of culture, heritage, language, Canadian identity and diversity to economic competitiveness and social cohesion
- ☐ employment creation and citizen participation on the Information Highway
- ☐ measures to promote more inclusive Canadian symbols, values and forms of cultural expression that reflect the increasing diversity of Canadian society
- ☐ measures to promote cross-cultural exchange, heritage tourism and community development
- ☐ changing government relations with the non-profit charitable sector
- ☐ the implications of changing work and leisure patterns on cultural participation and community voluntary activity

- ☐ the extent of digital literacy skills in Canada
- ☐ minority group integration in urban communities
- ☐ refining the collection of cultural statistics to measure the full impact of the Information Society (including work with the OECD Experts Group on the Global Information Infrastructure / Global Information Society).

Citizenship and Immigration, with its mandate of immigrant integration and promotion of citizenship values, has many concerns in common with Canadian Heritage. Its current and planned research focuses on:

- ☐ a longitudinal database on immigrant economic performance
- ☐ integration of immigrants in an urban context (the Metropolis Project)
- ☐ longitudinal studies of barriers to immigrant integration and strategies for dealing with these barriers
- ☐ evaluation of the Settlement Renewal Project, which promoted community involvement in immigrant integration
- ☐ attitudes to immigration and cultural diversity in Canada and other countries
- ☐ employment-related migration and its linkage to labour market and social policy concerns (OECD Working Party on Migration)
- ☐ immigration and international issues, such as trade and cooperation
- ☐ impact of economic integration in Europe and North America on border controls
- ☐ the foreign-born in Canadian prisons.

Human Resources Development is currently engaged in numerous research projects related to employment and equity, particularly with regard to women, youth and older workers. Its research focus on new skill sets for an information-based economy also ties in with similar work at Industry and Canadian Heritage. Current and planned research at HRDC includes:

- ☐ analysing the interaction of factors contributing to market income inequality
- ☐ developing longitudinal surveys of labour and income dynamics, the long-term effects of unemployment and the workplace and employees
- ☐ monitoring and analysis of trends in the nature of employment in the economy using data from the Work Arrangements Survey (1995) and the Survey of Labour and Income Dynamics

- ☐ continuing analysis of the Canada-US unemployment gap project
- ☐ developing databases on skills mismatch in the labour force (National Job Skills Survey, the Integrated Skills Framework, the Canadian Occupation Projections System), trends in employment insurance coverage and trends in labour force participation
- ☐ analysing the International Adult Literacy Survey in a Canada Report dealing with such topics as literacy and poverty, literacy and the economy and literacy and immigration
- ☐ looking at innovative practices and the high-performance workplace
- ☐ evaluating government policies to encourage more widespread adoption of innovative workplace practices (as part of the OECD's Expert Group on Technological and Organizational Change)
- ☐ monitoring the OECD's work on improved indicators for the knowledge economy, sponsoring a symposium on the construction of better social indicators of well-being in Canada and working with a federal-provincial working group on performance indicators for social programs
- ☐ developing a number of new surveys on children, youth, graduates, high school leavers, adult literacy, adult education and training, volunteering and giving and wealth, possibly leading to new models for internship or partnership with the provinces, private and voluntary sectors
- ☐ developing workplans on intergenerational equity
- ☐ examining the linkages between immigration and unemployment in the three largest metropolitan areas and the effectiveness of immigration in filling labour market gaps
- ☐ analysing the Survey of Labour Income and Dynamics, the Workplace and Employee Survey and the International Adult Literacy Survey to explore the labour market experiences of older workers.

Justice is concerned about the root causes of crime and about adapting the justice system to an increasingly diverse society and has identified the following research priorities:

- ☐ the need to apply research findings on violence against women and children to effective processing of abuse cases by the court system and to monitor recent changes in legislation dealing with criminal harassment and treatment of sexual assault victims
- ☐ community-based crime prevention studies
- ☐ the collection and analysis of statistics on hate crime and hate-motivated violence

- ☐ the need for better economic data on family expenditures for children and on default and compliance with support orders
- ☐ development of a research plan in support of the federal/provincial/territorial Working Group on Diversity, Equality and Justice
- ☐ information on the balancing of justice system costs with risk management of offenders
- ☐ research on the strategic application of information technologies within the justice system
- ☐ the exploration of culturally appropriate conflict-resolution measures in Aboriginal communities
- ☐ the extent of white-collar crime and the underground economy
- ☐ protection of intellectual property in the Information Society.

Industry Canada's primary research focus is on the factors contributing to productivity and innovation, including matching new technologies to enhanced human resource skill sets. Current research being done by or for Industry that appears relevant to social cohesion includes:

- ☐ Technology and Human Resources - Julian R. Betts
- ☐ Responding to the Challenges: Institutional Response - Ronald Daniels
- ☐ Stateless Corporations and the Nation State - S. Rao and C. Lee-Sing
- ☐ The Human Factor in Firms' Performance: Management Strategies of Productivity and Competitiveness - Keith Newton
- ☐ Infrastructure for the 21st Century - Chris DeBresson (includes informational and technological infrastructure, human resources, health care and legal system)
- ☐ Economic Performance of Canada's Information Sector - Hadj Benyakia

Underlying these workplans is the requirement, sometimes stated but more frequently implied, for more extensive data collection, analysis and support by **Statistics Canada** on the impacts of labour market and income disparities, demographic shifts, cultural consumption patterns and time use.

While it may be premature to suggest how these workplans could be better coordinated, it seems obvious that constructive synergies could be achieved between:

- ☐ Canadian Heritage, Citizenship and Immigration and Justice on diversity issues with regard to recent immigrants, visible minorities and Aboriginal peoples
- ☐ Canadian Heritage, Industry Canada and Human Resources Development on the human impacts of the Information Society,

including the need for new skill sets and the best means of promoting cultural expression and "good jobs" for Canadians in the global information economy

- ☐ Canadian Heritage, Industry Canada and Justice on means of protecting Canadian intellectual property in the Information Society and controlling violence and hate on the new media
- ☐ Canadian Heritage, Citizenship and Immigration, Health and Environment on new symbols and values for Canada as we approach the next millennium
- ☐ Canadian Heritage and Human Resources Development (possibly in partnership with the Department of Finance) on means of strengthening the non-profit, voluntary, charitable sector to help it take on more responsibility for community development on the "ground level"
- ☐ Human Resources Development, Health, Justice, Indian Affairs and Canadian Heritage on the improvement of the economic and social situation of women, children, youth, visible minorities and Aboriginal peoples
- ☐ Human Resources Development, Health, Industry Canada, Canadian Heritage and Statistics Canada on better social indicators for a knowledge-based economy
- ☐ Industry Canada, Canadian Heritage and Statistics Canada on better economic indicators for a knowledge-based economy.

Conclusions

As Oscar Wilde once said, "the truth is never pure and seldom simple". There are many serious research efforts under way in the federal government today to address various aspects of Canadian identity, culture, values and social cohesion. However, with some exceptions, these efforts are taking place in "stove pipes" and are not being presented to decision makers as a complete picture. Unfortunately, the tired story of the blind men and the elephant is perhaps the most appropriate analogy for current federal research efforts in this domain. We are all examining different parts of the elephant and drawing separate conclusions about its anatomy. In this case, the elephant is bigger and more complex than we think, and its real shape can only be determined if we work together.

The first step will be to come to a collective agreement on government priorities and on a workplan to address major horizontal research themes. The second will be to take the synergies that emerge from the discussions of the ADMs Policy Research Committee and develop partnerships among the departments that possess relevant expertise and interest in each of the research areas. The third will be to find the resources needed to deliver on the workplan.

This paper began with the observation that Canada will need a new sense of common purpose to preserve social cohesion and to take the country, intact and thriving, into the next century. An analysis of current research on socio-economic aspects of Canadian life today and on trends for the future suggests that the primary obstacle standing in the way of a new national dream is the perception among many Canadians that Canada is no longer a land of opportunity -- a society where they can realize their aspirations and be treated with dignity and fairness. Unhappily, much of the research done by federal departments over the past few years tends to confirm the existence of a growing class of "les exclus". It would appear that these trends will continue, at least over the medium-term.

Values underpin a society's approach to social capital. If cost-minimization and short-term competitiveness continue to drive public policy, the result will be "job-shedding", accompanied by growing polarization in Canadian society between those with job skills in high demand and those who can no longer participate in the economy. However, if a society values the well-being of all its citizens, it will instead focus on long-term competitiveness where investments in human capital are given prominence. The choice must be made by all developed nations as we approach the 21st century -- Canada included.

It is unrealistic to expect a return to some mythic "simpler time" when most Canadians rallied behind "King and Country" and few questioned the social order or the values imposed by church and state. On the other hand, a country that does not identify its common values and promote a shared commitment to its future may cease to be a country altogether. Canada's diverse population, rich resource base, advanced communications infrastructure and comprehensive social programs represent strengths that can be built upon, but only if Canadians can agree upon an idea (or ideas) that are as big and as encompassing as the country itself.

Canadian identity, including the values that determine what Canadians cherish and how society's resources are distributed, must become a central issue for public decision makers. However, identity and social cohesion should not be looked at in isolation from Canada's need for economic renewal or environmental sustainability. A healthy population, with good jobs and optimism about the future, will be a key competitive advantage for Canada. Public policy research should explore the interlinkages between attachment to Canada, wider participation in the knowledge-based economy, concern for social equity and environmental protection and suggest tools that will strengthen our collective commitment to a better life for Canadians by the year 2005.

Appendix

Bibliography

- Adsett M. *An Empirical Analysis of Symbols of Canadian Identity*. A Paper presented at the 1996 Learned Societies Conference. Brock University. St. Catherine's. June 1996.
- Akbari, A. "The public finance impact of immigrant population on host nations: some Canadian examples," *Social Science Quarterly*, 72 (2). pp: 334-346, 1991.
- Anderson Consulting. *What Canadians Think of the Information Highway*, March 1995.
- Anderson, Walter Truett. *Reality Isn't What It Used to Be*. San Francisco: Harper & Row, Publishers, 1990.
- Angus Reid Group, *A Portrait of Canada on its 129th Birthday*. A Southam Angus Reid Group Survey. Angus Reid Report, July/August 1996.
- Angus Reid Group. *Canada and the World*, 1992.
- Angus Reid Group. *Canadian Households in the Information Age*, June 1995.
- Angus Reid Group. *Renewing Canada*, April 1996.
- Antoine, Camille. "An X-ray of the French motion picture industry," *Label France*, March 1995.
- Badets, J. and T. Chui. *Focus on Canada: Canada's changing immigrant population* Ottawa: Statistics Canada and Prentice Hall Canada inc., 1994.
- Baker, M. and D. Benjamin. *Ethnicity, foreign birth and earnings: a Canada / US comparison*, a paper prepared for the conference: Transition and structural change in the North American Labour Market, May 25-27 in Kingston, Ontario, 1995.
- Beck, Nuala. *Shifting Gears: Thriving in the New Economy*, Harper Collins, Toronto, 1992.
- Bénabou, R. 1996, forthcoming in NBER *Macroeconomics Annual*.
- Berryman, Sue. "The Contribution of Literacy to the Wealth of Individuals and Nations" in *Adult Basic Skills: Advances in Measurement and Policy Analysis*, Hampton Press, New York (in press).
- Betcherman et al. *The Canadian Workplace in Transition*, 1994.
- B'nai Brith (The League for Human Rights). *Audit of Anti-Semitic Incidents 1995*. Toronto, 1995.
- Borjas, G and S. Trejo. "Immigrant participation in the welfare system", *Industrial and Labour Relations Review*. 44 (2). pp: 195-211, 1991.

Borjas, G. "Self-selection and the earnings of immigrants," *The American Economic Review*, 77 (4). pp: 531- 553, 1987.

Borjas, George. "The Economics of Immigration", *Journal of Economics Literature*, December 1994.

Breton, R. et al. *Ethnic Identity and Equality: Varieties of Experience in a Canadian City*. Toronto:University of Toronto Press, 1990.

Breton, Raymond. "Ethnicity and Race in Social Organization: Recent Developments in Canadian Society", in *Thirty Years After The Vertical Mosaic*, edited by Rick Helmes-Hayes, University of Toronto Press, (in press).

Building the European Information Society for All of Us: First Reflections of the High Level Group of Experts. Interim Report, January 1996.

Business Week. "The Office of the Future", April 29, 1996.

Butt, Roger and Motzney, Barbara. *International Comparative Review of Citizenship and Identity Youth Policies and Programming*, Paper prepared by the Strategic Research and Analysis Directorate, Department of Canadian Heritage, 1994.

Butt, Roger. *National Symbols and National Identity: An International Comparative Review*. Paper prepared by the Strategic Research Directorate, Department of Canadian Heritage, 1996.

Cameron, David. *Taking Stock: Canadian Studies in the Nineties*. Report prepared by the Association of Canadian Studies, Montreal, 1996.

Canadian Centre for Philanthropy. *Research Bulletin*, June 1996.

Canadian Fitness and Lifestyle Research Institute. *How Active Are Canadians?* May 1996.

Canadian Heritage. *Canadian Heritage Involvement in the Prevention of Violence in Society*. March 1996.

Canadian Heritage. "1991 Employment equity data." Ottawa: the Research Group, 1993.

Canadian Heritage. "Ethnic origins in Canada, 1986/1991: A graphic overview." Ottawa: PCSP, Canadian Heritage, 1994.

Canadian Heritage. *Sport Canada Plan*. Draft document - January 1996.

Canadian Heritage. *Sport Participation in Canada*. Based on 1992 Statistics Canada General Social Survey (GSS).

Canadian Tourism Research Institute (CTRI). *Travel Exclusive*, January and May/June 1996 Issues.

Carey, Elaine. *It's Official: Women's Work Never Done*, The Toronto Star, Dec. 11, 1995.

Chiswick, B. "The effects of americanization on the earnings of foreign-born men," *Journal of Political Economy* vol 86 (October). pp:897-921, 1978.

Christofides and Swidinsky. "Wage determination by gender and visible minority status: evidence from the 1989 LMAS," *Canadian Public Policy*, 20 (1), pp: 34-51, 1994.

Citizenship and Immigration Canada. "*Immigration Statistics: 1994*". Ottawa: CIC, 1994.

Citizens' Forum on Canada's Future. *Report to the People and Government of Canada*. Keith Spicer, Chairman. Ottawa, 1991.

Clement, Andrew and Regan Shade, Leslie. *Defining and Maintaining Universal Access to Basic Network Services: Canadian Directions in an International Context - Part 1 - Research Report Summary*, Faculty of Information Studies, University of Toronto, 1996.

Commonwealth of Australia. *Creative Nation* (Canberra, 1994).

Coopers and Lybrand Consulting. *Domestic Travel Market Research Study 1996*, prepared for the Canadian Tourism Commission, 1996.

Currie, Albert (with Kiefl, George). *Ethnocultural Groups and the Justice System in Canada: A Review of the Issues*. Department of Justice: Research, Statistics and Evaluation Directorate, WD1994-e, 1994.

Dai, S. and M.V. George. *Projections of visible minority population groups, Canada, provinces and regions: 1991-2016*. Ottawa: Statistics Canada catalogue #: 91-541, 1996.

daSilva, A. "*Earnings of Immigrants: a comparative analysis*". Ottawa: Economic Council of Canada working paper series, 1992.

Day, Richard, *The National Jewel as the Canadian Thing*. Paper presented at the 1996 Learned Societies Conference. Brock University. St. Catherine's. June 1996.

de Voretz, Don. J. *Diminishing Returns: The Economics of Canada's Recent Immigration Policy*. C.D. Howe Institute, 1995.

Department of Justice. *Environmental Scanning and Scenario Building in the JLA Community*. Working Group Report, March 1996.

Department of Justice. *Strategic Focuses in the Canadian Justice System*. Strategic Planning and Special Projects Section Research, Statistics and Evaluation Directorate, Policy Sector, November 1995.

Department of Justice. *Symposium on Digital Technology and Copyright*. Intellectual Property Secretariat, Legal Services Sector, 1995.

Devereaux, Mary Sue. "Time Use of Canadians in 1992", *Canadian Social Trends*, Autumn, 1993.

deVoretz, D. and Fagnan, S. *Some evidence on Canadian immigrant quality decline: foreign-born versus resident-born earnings functions for 1971-86*, Vancouver: SFU mimeograph, 1990.

Dickenson, Paul and Sciadas, George. *Access to the Information Highway: Services Indicators*, Statistics Canada, 1st Quarter, 1996.

Dickenson, Paul T. *Access to the Information Highway: Canadian Households*, Industry Canada, Spring, 1996.

DJC Research. *IMAT: The Multimedia Industry in Canada*, May, 1995.

Drucker, Peter F. "Post-Capitalist Society", *Harper Business*, New York, 1993.

Drucker, Peter. "The Age of Social Transformation", *The Atlantic Monthly*, November, 1994.

Duchesne, Doreen. *Giving Freely: Volunteers in Canada*, Statistics Canada, Ministry of Supply and Services, 1989.

Durand, Michel G., *Economic Impact of the Culture and Information Services Industries in Canada*. Statistics Canada, February, 1996.

Economic Council of Canada. *Economic and Social Aspects of Immigration*. Minister of Supply and Services, 1991.

Ekos Research Associates. *Diversity, identity and the state: towards a new equilibrium, 'Rethinking Government '95 (CCI Study)*. A report submitted to Citizenship and Canadian Identity, Dept of Canadian Heritage. 1996.

Ekos Research Associates. *Rethinking Government Project*. 1994, 1995.

Environics Research Group. *Canada: A Socio-Cultural Profile*, prepared for Canadian Heritage by Environics Research Group Limited, March 28, 1996.

Environics Research Group. *Focus Canada Report*, 1994-1.

Environics Research Group. *Focus Canada Report*, 1995-3.

Environics Research Group. *Focus Canada Report*, 1996-1.

Environics Research Group. *National Symbols. Report for the Department of Canadian Heritage*, February 1995.

Environics Research Group. *Symbols and the Generational Segments*. Report for the Department of Canadian Heritage, May 1996.

Environics Research Group, *Symbols of Canadian Identity*. A segmentation study based on the Focus Canada Report 1994-1 prepared for the Department of Canadian Heritage, 1994

Environics Research Group, *The 3SC Monitor*, 1994, 1995.

Evans, M. and J. Kelley. "Immigrants' work: equality and discrimination in the Australian labour market", *Australian and New Zealand Journal of Sociology*. 22 (2). pp: 187-207, 1986.

Evans, M. and J. Kelley. "Prejudice, discrimination and the labour market: attainments of immigrants in Australia", *American Journal of Sociology*. 97 (3). pp: 721-759, 1991.

Evenson, Brad. "Change "Too Fast" for Many", *The Record*, July 2nd, 1996.

Foot, David, *Boom Bust & Echo How to Profit from the Coming Demographic Shift*. Toronto: Macfarlane Walter & Ross, 1996.

Frederick, Judith. "Tempus Fugit: Are You Time Crunched?", *Canadian Social Trends*, Winter 1993.

Generations Research Inc. *An Analysis of the Rationale for the State Ceremonial Branch in the Context of Canada Today*. Unpublished paper prepared for the Department of the Secretary of State. Ottawa, 1990.

Goldfarb Consultants, *Heritage Test: Summary Findings* Prepared for the Association of Canadian Studies, 1991.

Goldfarb Consultants, *The Goldfarb Report*, 1995.

Goldfarb Consultants, *The Goldfarb Report*, 1996.

Gouvernement du Quebec, *Se souvenir et devenir: Rapport du Groupe de Travail sur l'enseignement de l'histoire* (Quebec:1996)

Government of Canada. *Shared Values The Canadian Identity*, Minister of Supply and Services Canada, 1991

Government of Canada. *Working Group on Canadian Programming and Private Television*, March 1995 "The Future of Canadian Programming and the Role of Private Television: Keeping Canada on the Information Highway" and "Building the Information Society: Moving Canada into the 21st Century, 1996.

Greenwood, M. and J. McDowell. *The Labour Market Consequences of US Immigration: A Survey. Immigration Policy and Research Working Paper 1*. Washington DC: US Department of Labour, Bureau of International Labour Affairs, 1990.

Guité, M.J.C. *Les valeurs des Québécois et Québécoises en 1995 et le prochain referendum*. INFRAS Inc., 1995.

Gwyn, Richard. *Nationalism Without Walls: The Unbearable Lightness of Being Canadian* Toronto: McClelland and Stewart, 1995.

Handy, Charles. *The Age of Unreason*, Harvard Business Press, Boston, 1990.

Harrison, B. and L. Marmen. *Focus on Canada: Language in Canada*. Ottawa: Statistics Canada and Prentice Hall Canada inc., 1994.

Henry, F. *Housing and Racial Discrimination in Canada: a preliminary assessment of current initiatives and information*, 1989.

Insight Canada Research Group. *Public Attitudes Toward Broadcasting and New Technologies*, March 1996.

Jeffrey, Liss. "Rethinking Audiences for Cultural Industries: Implications for Canadian Research." *Canadian Journal of Communications*. Vol. 19, No. 3/4, 1995.

Kaestle, Carl F. et.al. *Literacy in the United States: Reading and Readers Since 1880*, Yale University Press, New Haven, 1991.

Kelley, J. and I. McAllister. "Immigrants' socioeconomic attainment and politics in Australia," *British Journal of Sociology*, 35 (3). pp: 387-405, 1984.

Kerr, D. and B. Ram. *Focus on Canada: Population Dynamics in Canada*. Ottawa: Statistics Canada and Prentice Hall Canada inc., 1994.

Kiefel, Barry. *Specialty Channels: Consumer Interest and Use*. April 1996.

Labelle, Marc. "Le statu quo: un camouflage du sous-développement de l'Ontario français? Le taux d'analphabétisme fonctionnel des Franco-Ontariens est désastreux," *Le Devoir*. June 8, 1995.

Lanham, Richard. "Digital Literacy", *Scientific American*, Vol. 273, No. 3, 1995, p. 198-200.

Lanham, Richard. *The Electronic Word: Democracy, Technology and the Arts*, The University of Chicago Press, Chicago, 1993.

Li, Peter. *State of the Art Literature Review on Immigration: Sociological Perspectives*. Citizenship and Immigration Canada, in press.

Mann, Richard and Goldberg, Michael. *The Legal Problems of Multicultural Canadians in Greater Vancouver: A Research Report*. Department of Justice Working Document WD1993-1e, 1993.

Masemann, Vandra. *Citizenship Education in Canada: The Current Status of Teaching about Citizenship in Canadian Elementary and Secondary Schools*. September 1987.

Mata, Fernando. "Birthplace and Economic Similarities in the Labour Force: An Analysis of Toronto's Census Microdata," in *Immigration and Ethnicity in Canada / Immigration et ethnicité au Canada*. Eds. Anne Laperrière, Varpu Lindström and Tamara Palmer Seiler. Montreal: Association for Canadian Studies, 1996.

Màté Kovács. "Cultural Policies in a Changing World". *Boekmancahier*, Vol 21, 1994.

Maxwell, Judith. *Social Dimensions of Economic Growth*. Department of Economics, University of Alberta: The Eric John Hanson Memorial Lecture Series, Volume VIII, January 25, 1996.

McRae, Don. *Towards a Charitable Market Place*, Draft Paper, Community Partnership Program, Department of Canadian Heritage, 1996.

Menzies, Heather. *Whose Brave New World? The Information Highway and the New Economy*, Between the Lines, Toronto 1996.

Miller, P. "Aspects of occupational mobility and attainment among immigrants in Australia," *International Migration Review*. 21 (1). pp: 96-109, 1987.

Minister of Supply and Services. *Building The Information Society: Moving Canada Into The 21st Century*, 1996.

Ministères des Affaires internationales, d'Immigration et des Communautés culturelles et Centre d'études ethniques. *Actes du Séminaire sur les indicateurs d'intégration des immigrants*. Université de Montréal, 1994.

Moze, Dora, Wendy Hansen, and George Sciadas. *Measuring the Global Information Infrastructure for a Global Information Society - Performance Indicators*, Industry Canada, Ottawa, March, 1996.

Nakamura, A. and M. Nakamura. *Wage rates of immigrant and native men in Canada and the US*, Edmonton: U of A unpublished manuscript, 1990.

Negroponte, Nicholas. *Being Digital*, Vintage Books, New York, 1995.

Neice, David C. *Information Technology and Citizen Participation*, Department of Canadian Heritage, 1996.

Newman, Peter C. *The Canadian Revolution 1985-1995: From Deference to Defiance*. Toronto: Viking, 1995.

Nielson Media Research. *The CommerceNet/Nielson Internet Demographics Survey*, 1995.

Nordicity Group. *Population projections of ethnic groups: Canada, provinces and territories, 1991 to 2006*, Ottawa: prepared for SRA, Dept of Canadian Heritage, 1996.

Nordicity Group Ltd.. *The Nielson/Nordicity Canadian Internet Survey*, January 1996.

Norris, M.J. *Projections of Aboriginal populations in Canada, 1991-2016: trends and issues*. Published proceedings: Federation of Canadian Demographers 1995 Symposium (October 23-25 1995). pp: 251-263, 1995.

OECD Centre for Educational Research and Innovation *Adult Literacy and Economic Performance*, Paris 1992.

OECD Directorate for Science, Technology and Industry. *Global Information Infrastructure - Global Information Society. Statement of Policy Recommendations made by the ICCP Committee*. Paris, May 15, 1996.

OECD and Statistics Canada. *Literacy, Economy and Society: Results of the First International Adult Literacy Survey*. 1995.

OECD, *Technology, Productivity, and Job Creation*, Vol 1, OECD Publications Service, Paris, 1996.

Osberg, L. "The costs and Benefits of Anti-Poverty Policy". *Dalhousie Working Papers in Economics*, Dalhousie University, Halifax, 1990.

Osberg, L. "The Equity/Efficiency Trade-off in Retrospect," *Business Economics*, Spring 1995.

Palmer, D. Douglas. *Anatomy of an Attitude: Origins of the Attitude toward the Level of Immigration to Canada*. Citizenship and Immigration Ottawa, 1994.

Palmer, D. *Initial Report on Survey of Citizenship Issues*. Department of Citizenship & Immigration, January 1996.

Papademetriou, D. et al. *The Effects of Immigration on the US Economy and Labour Market. Immigration Policy and Research Report 1*. Washington DC: US Department of Labour, Bureau of International Labour Affairs, 1989.

Pendakur, K and R. Pendakur. *The colour of money: Earnings differentials among ethnic groups in Canada*, Ottawa: Strategic Research and Analysis, Canadian Heritage, 1996.

Pendakur, R. "Labour market theories and the place of persons speaking neither english nor french", in B. Burnaby and A. Cumming *Socio-Political Aspects of English as a Second Language in Canada*. Toronto: OISE Press, 1990.

Pendakur, R. *The changing role of post-war immigrants in Canada's labour force: an analysis across four census periods*, unpublished doctoral dissertation. Ottawa: Carleton University, 1996.

Persson, T. and Tabellini, G. "Is Inequality Harmful for Growth?", *American Economic Review*, V. 84, No. 3, June 1994.

Peters, Suzanne, *Exploring Canadian Values: Foundations for Well-Being*, CPRN No. F01, 1995.

Porter, J. *The Vertical Mosaic*, Toronto: University of Toronto Press, 1965.

Putnam, Robert D. *Bowling Alone: Democracy in America at the End of the Twentieth Century*, Harvard University Press, 1994.

Putnam, Robert "The Prosperous Community: Social Capital and Public Life", *The American Prospect*, Vol .13, Spring 1993, pp.35-42

Putnam, Robert, "The Decline of Civil Society", *Optimum*, Vol.27-1, 1996 (forthcoming)

Reich, Robert B. *The Work of Nations: Preparing Ourselves for 21st Century Capitalism*, Vintage Books, New York, 1992.

Revenue Canada, Charities Division. *Special Tabulations*.

Rifkin, Jeremy. *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era*, Putnam Books, New York, 1995.

- Roberts, Julian V. *Disproportionate Harm: Hate Crime in Canada*. Department of Justice: Research, Statistics and Evaluation Directorate, WD1995-Ile, 1995.
- Rosell, Steven A. *Changing Maps: Governing in a World of Rapid Change*. Ottawa: Carleton University Press, 1995.
- Ross, David. *The Economic Dimensions of Volunteer Work in Canada*, Ministry of Supply and Services Canada, 1990.
- Saraq, Sean. *Personal Communication*, Environics Research Group, August 1996
- Savoie, G. *The comparative advantages of bilingualism on the job market*, Ottawa: Strategic Research and Analysis, Canadian Heritage, 1995.
- Sears, Alan and Hughes, Andrew. *A Review of Citizenship Education in Canada*, Unpublished paper prepared for the Department of Canadian Heritage. 1994.
- Secretary of State. *Canada's Off-reserve Aboriginal Population*. Ottawa: Social Trends Analysis Directorate, Department of Secretary of State, 1991
- Silver, Cynthia. "Spending patterns of Canadian Households, 1969-1992" in *Canadian Social Trends*, Winter 1994 (Catalogue 11-008E).
- Simon, J. *The Economic Consequences of Immigration*. Cambridge, Mass: Basil Blackwell Press, 1989.
- Smith, Philip. *Assessing the Size of the Underground Economy: The Statistics Canada Perspective*. August 8, 1996.
- Standing Senate Committee on Social Affairs, Science and Technology, *Canadian Citizenship: Sharing the Responsibility May*, 1993.
- Statistics Canada. *As Time Goes By...Time Use of Canadians*, Ministry of Supply and Services, 1994.
- Statistics Canada. "Canadians Working at Home", *Canadian Social Trends*, Spring, 1996.
- Statistics Canada. *Census of Canada Special tabulations prepared for the Department of Canadian Heritage*, 1991.
- Statistics Canada. *Family Expenditures in Canada*. Cat. 62-555.
- Statistics Canada. *Focus on culture*. Quarterly Bulletin from the Culture Statistics Program. Summer 1996, Vol 8, No. 2.
- Statistics Canada. "Canadian Government Intervention in the Film and Video Industry" *Focus on culture*, Groupe SECOR. October 1994, p.41.
- Statistics Canada. *Knowledge of Languages: the nation*. Ottawa: Statistics Canada, 1993. Statistics Canada. *National Tourism Indicators, Historical Estimates 1986 to 1995*.

Statistics Canada. Papers submitted to ADMs Policy Research Committee on August 7, 1996, including *Earnings and Income* and *Immigration: Issues of Adaptation, Diversity and Social Cohesion*, 1996.

Statistics Canada. *Population projections for Canada, provinces and territories*. Ottawa: Statistics Canada catalogue # 91-520, 1995.

Statistics Canada. *Provincial Overview of Domestic Travel in Canada in Travel-log*. Spring 1996.

Statistics Canada. *The Daily*. August 23, 1995.

Statistics Canada. *Touriscope, Domestic Travel*, 1994 (+ previous years).

Stein, Art. *Art, Identity, the Individual: Post -traditional First Nations Art in the Age of Modernity*. A Paper presented at the 1996 Learned Societies Conference. Brock University. St. Catherine's. June 1996.

Stevens, Barrie, "The Social Fabric under Pressure", *The OECD Observer*, No. 189, pp. 19-22. August/September 1994.

Taylor, Christine L. *Dimensions of Diversity in Canadian Business*. Ottawa: Conference Board of Canada, 1995.

Tepper, Elliott. *Symbolism and Pluralism in Canada*. Paper prepared for the Department of Canadian Heritage, 1994.

Tera, S. and Wang, K. *Changing Canadian Industrial Structure - Shifts in Output Growth*. Industry Canada Working Paper, 1995.

The GII-GIS - *Statement of Policy Recommendations Made By The ICCP Committee To OECD Ministers*, May 1996.

This Week in Germany, February 23, 1996.

United Nations Development Program. *Human Development Report 1995*. New York, 1995.

United Nations Development Program. *Human Development Report 1996*. New York, 1996.

World Economic Forum and International Institute for Management Development. *World Competitiveness Report*. Geneva, 1995.

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Regions and Communities

Industries, firms and individuals working in urban, rural and remote communities generate Canada's economic growth. The performance of Canada in today's global economy can be seen as the sum of these local economies. Performance, however, is not uniform. Some areas grow while neighbours stagnate and suffer social dislocation. There is a growing recognition that national economic performance depends on the ability of all regions and communities to compete successfully within the global economy. At the same time, governments are coming to appreciate the costs and their own limitations in fostering community economic development and in addressing fully the social implications of under-performing regions and communities.

If growth is the sum of the wealth generation from Canada's various communities, it is important for us to understand:

- ☐ how economic development evolves within Canadian communities;
- ☐ the key economic and social issues associated with development and how they interrelate, and
- ☐ what types of government policy are most effective in promoting growth and maintaining social stability and equity

The federal government and research institutions conduct research into regional, rural and urban issues. An informal review of federal departments, however, indicates that in some areas they have or are doing much research, while in others they have done little. Also, the

responsibility for these issues rests in several different departments and levels of government, which fragments our efforts and understanding. As a result, the government lacks the empirical evidence on which to base a comprehensive policy framework for addressing economic development at the regional and sub-regional level. Research gaps need to be filled and the research completed or underway needs to be brought together.

Moreover, research in this area is a moving target. Answers from the past may no longer be applicable, as we now have to act in face of:

- ☐ declining government funds, that is no direct government subsidisation of economic activities and declining ability to provide the social safety net that cushioned the social consequences of under-performance and economic transitions in the past;
- ☐ global economic competition, restructuring and downsizing of industry and governments at all levels;
- ☐ new information technologies that are attacking the historical barriers of geography and distance.

Four areas are suggested as a research framework for developing policy on the community dimension of economic development:^{*}

Rural Economic Renewal

1. Urban Growth
2. Regional Competitiveness in the Global Economy
3. SME Growth, Entrepreneurship and Community Economic Development

Development issues do not necessarily fit neatly into these areas of research. Many issues, such as those relating to technological change, infrastructure, education and business incentives, cover each category and beyond into areas of national policy. However, the topics encompass many policy issues of relevance to federal efforts to promote economic growth at regional and local levels. Also, this framework is compatible with the way the OECD has organized its "territorial" research and policy agenda. By adopting a similar framework, we can maximize the opportunities to benefit from comparable international research.

Research on stimulating economic growth among Canadian communities should consider some overriding questions reflecting on governance and the more general policy environment of the government:

^{*} There is a large body of literature that refers to community economic development (CED) and this concept is discussed in section 1. However, in this paper community and community development encompasses the broader issues of urban, rural and regional development.

- ☐ How do we measure the success of economic development policies for regions, urban areas and rural communities?
- ☐ To what extent should economic services and programmes be designed to respond to welfare and distributional issues?
- ☐ How can the federal government work horizontally and in partnership with other governments and stakeholders to address the issues?
- ☐ Which government or government departments should deliver needed services and programmes?
- ☐ Do models of economic growth and government service delivery identified in research work to strengthen concepts of belonging or to emphasize divisions within the country?
- ☐ Is there a link between economic growth and social cohesion?
- ☐ What are the "best practices" in Canada internationally in fostering community-based wealth generation?

Rural Economic Renewal

State of Knowledge

Many of the economic mainstays of rural areas and communities are changing. Trade agreements, tariff reductions and decreased government financial support exposes agriculture and other areas of the rural economy to unfettered global economics. Coastal communities face drastic reductions in fisheries. Non-agricultural, single industry towns are struggling to cope with the loss of jobs taking place in the forestry and mining industries. The family farm and rural communities have been and continue to be under threat for a variety of economic reasons. The result is that in many areas communities are shrinking and the rural population is declining, now only 33% of the total Canadian population. Too few job opportunities force young people to migrate, leaving behind older people who form a disproportionate percentage of the population in many farming and fishing communities.

The age profile in many northern aboriginal communities is the opposite; children are the most significant demographic characteristic. Unresolved health problems (water and sewers and consequent high levels of infant mortality) and social problems, such as substance abuse, are accentuated by the lack of economic opportunities in such communities.

An interest in rural research has re-emerged recently, particularly among academics and within the federal and provincial governments. Note, for example, the work of the Canadian Rural Restructuring Foundation and Stabler's research on trade centres in rural Saskatchewan (which shows the decline of small communities as residents travel further for services (Stabler,

1992)). At the federal level, indicators on demographic characteristics, employment and other social trends in rural Canada have been assembled. This work has in part been undertaken for the OECD Rural Development Program (OECD, 1994) and in subsequent research that led to the publication of *Rural Canada: A Profile* (1995). Earlier work undertaken at Statistics Canada examined a typology for rural economies and identified a number of distinct rural areas across Canada (Statistics Canada, 1995).

Analysis of the implications of demographic trends in rural Canada on infrastructure and services, job creation and the social safety net has not been undertaken in the depth necessary for future policy development. Projecting trends, identifying areas facing the greatest pressures and communities under threat, and analysis of the consequences of different policy options still need to be done.

The federal government has long had an important role in rural communities and the rural economy through farm assistance and insurance programs, supply marketing strategies, transportation services and infrastructure, aboriginal programs and other government services and policies. Recent policy changes at the federal level bear on what is happening currently in rural Canada. Examples include privatizations of CNR, closure rural post offices, the abandonment of rail lines and roads, the elimination of the Western Grain Transportation Act and reductions in international tariff barriers under GATT, FTA and NAFTA. One non-economic consequence is the lessening of the federal presence. This may contribute to the growing perception that the government is not listening to the needs and concerns of rural areas. It raises the question of what the reduction in the federal presence means for the rural citizen's sense of belonging to the nation?

While some of the traditional pillars of the rural economy may be crumbling, new economic and technological forces are offering new opportunities. For many economic activities, location is becoming less important as the Internet and electronic commerce decrease dependence on location based transactions. New economic activity based on information technologies may no longer need the advantages of urban agglomerations. In smaller communities, SMEs, even micro-businesses, and professionals, such as doctors, can deal directly with suppliers and customers, and access directly the latest commercial and professional expertise.

Some research has been done to examine the benefits of new information technology for the agriculture industry (Howard, et al., 1996).

With less need for face-to-face transactions, the quality of life of many smaller communities can be a comparative advantage in attracting new people with new economic opportunities and for increasing the opportunities for existing residents. One can hypothesize that some communities could use the new technologies to take advantage of opportunities in the new high tech economy. They may not need to follow

the classic economic development path from traditional primary, to secondary and tertiary economic growth. This could be an opportunity for aboriginal communities in remote locations. However, the evidence shows high tech enterprises growing more slowly in rural areas and employing a smaller percentage of the workforce (33% to 50% fewer) than in major urban areas and medium sized cities.

Capitalising on the unique characteristics and resources of rural areas can present opportunities for the production of niche goods and services. Considerable work on niche marketing as a strategy for rural development has been done by the OECD. However, niche market development and its application in the Canadian rural context has not been analysed in depth.

In the traditional primary industries, new cost efficient technologies are coming into use in drilling for oil, gas and minerals, processing traditional and new sources of fibre (e.g., poplar, straw) and in energy use. However, these industries are more important for wealth creation than for employment. Only about 13% of employment in rural and remote areas is in these industries (although 68% of employment in primary industries is in rural areas). New activities, such as aquaculture, will also have a role in the future economies of some coastal communities. These may give a new lease on traditional primary and secondary resource sectors and will have a favourable impact on resource dependent communities.

More research and analysis are required to understand the impacts (positive and negative) on rural Canada from exposure to the new global economy. Research in this area needs to identify reasons for the decline of rural areas, the problems of single industry towns, successful efforts to halt the rural and small town exodus, and changing economic and technological factors that have revitalized some rural areas.

What Needs to be Known

Demographic Trends: Rural populations are declining. Youth are leaving and the rural population is ageing. In northern aboriginal communities the proportion of young children is growing. 83% of the rural population growth from 1981 to 1991 occurred in metro-adjacent regions. Urban sprawl and the purchases of rural lands for recreational purposes create a host of issues relating to the loss of productive agricultural land, the demand for new services and cost of real estate. Economic and demographic trends in urban and rural areas are closely related. Much is already known about the trends. Analysis is needed on the impacts of the trends on the rural economy and their implications for future policy from an economic and social welfare perspective.

Employment Trends: There has been considerable work done on rural employment trends. Analysis remains to be done on what these trends imply in the long term — opportunities in new economy style enterprises, disadvantaged groups such as aboriginal youth, employment growth areas, significance of corporate farming, etc.

New technologies: New information and resource extraction technologies would seem to offer economic opportunities for rural and remote communities. Can we develop a profile of the types of emerging opportunities and identify ways to adopt these technologies to increase the economic opportunities available? Will technology continue to drive the decrease in jobs in agriculture and resource extraction industries, or will the rate flatten out?

Infrastructure: Rural areas are often handicapped by the lack of adequate physical (water and sewers), transportation, telecommunications, educational and health infrastructures. What is the state of rural infrastructure? How does it vary from region to region? What constitutes minimal infrastructure needed for economic growth?

Rural Amenities: What is the contribution to economic development of the natural and man-made heritage of rural areas, especially where market prices do not reflect the value of this heritage? How should government respond to the demand by society for such environmental and heritage amenities, while at the same time ensuring an appropriate return for those who provide them?

Development of Coastal Communities and Single Industry Towns: Many coastal communities are facing the loss of their resource base in the fisheries. Similarly, many rural communities depend on mines, pulp mills and other industrial activity with a limited long term future. Normal regional development models do not adequately provide guidance on strategies for overcoming the problems of these communities. Research needs to be conducted on the factors leading to successful community development. Why do some apparently disadvantaged communities survive and prosper, while others stagnate or decline? Does government have a role in directing development initiatives or should government leave responsibility to the local communities and only offer limited support in a community's development efforts? What is the potential of relatively new economic activities, such as aquaculture, to stimulate growth in appropriately sited rural communities?

Sectoral or Spatial Support: Government is disengaging from many of the sectoral financial programs and services that have been integral to the economic life of rural Canada (e.g., agriculture, fisheries, transportation). There is a need to continue to examine the impact of sectoral policies on the rural communities. What is the appropriate role for the federal government in rural development? How should it work in partnership with other levels of government and the private and not for profit sectors in the delivery of government services?

Urban Growth

State of Knowledge

Cities are the hub of economic and cultural activity. The way cities respond to the changing economic environment will influence the wider economic regions over which they have such a strong influence and ultimately national economic performance. The recent recession has had a profound affect on the traditional industrial base located in the cities from Windsor, Toronto to Montreal. A major economic restructuring is underway, the outcome of which is not certain. Will the restructuring leave behind pockets of unemployed, under-employed and unemployable workers in decaying urban cores? High tech clusters are emerging in other areas, a phenomenon that the three regional agencies are investigating as loci for economic growth. Much of this new growth is occurring just outside the traditional urban centres in places like Kanata and Richmond, B.C.

Immigration is altering the ethnic composition dramatically in some urban centres. With the new immigrants come issues of adaptation and integration. The new immigrants are also younger, offer new skills and some invest substantially in their adopted country. Internal migration adds another dimension to the human resource equation in urban economic development.

Canada is participating in an international multi-disciplinary research initiative, the Metropolis project, on the effects of international migration on cities. Research focuses on policies to manage migration with minimal tension, links between migration and economic restructuring, policies to ensure fair, equal treatment and improved living standards, and policies to balance the rights of new citizens with those of the host population. A number of federal departments are supporting the \$8 million six year project.

The federal government has long had an interest in urban affairs. Explicit recognition of that interest has been through CMHC and for a period through the Department of Urban Affairs. Their focus has been on housing and social housing issues, and related work on sustainable urban planning, homelessness, aboriginal needs and contaminated lands. Since the decision to disband the Department of Urban Affairs, the federal government has not had an active role in urban economic development. However, the federal government remains an important player in cities because of its sectoral responsibilities in transportation, employment and training, immigration, special international events (e.g., Olympics), infrastructure funding, and other activities.

Although many responsibilities, such as for airports and harbours are devolving, the federal government will remain an important player. But how much should the government co-ordinate its various activities and responsibilities to promote federal priorities at the urban level? The answer has been to work in partnership with the local communities and the

provinces so that federal initiatives can work to support local priorities while meeting federal responsibilities. This requires federal departments to work well together to coordinate their activities as they affect urban areas.

What Needs to be Known

Demographic and Employment Trends: Since much work has been done on charting trends, what are the implications for social and economic policy? For example, the research under the Metropolis Project should result in better understanding of the urban effects of international migration and the policy options to accommodate successfully immigrants.

Core Areas: There is a perception that the core areas of some of the major cities are becoming the waste grounds for the social problems arising from under-performing regional economies. Unemployment, unemployability, welfare, homelessness, crime and violence, ethnic tensions may be brewing a cycle of urban decay that is driving away employers from the area and it making it difficult to attract new ones. In what cities is this an issue? What is needed to stop the vicious cycle and make these core areas again vital parts of their regional economies?

The Economics of Cities and Surrounding Areas: How are cities changing in relation to their surrounding regions? Is the locus of economic activity changing from the urban core to outlying suburbs or beyond? If such changes are occurring, what are the patterns, e.g., are high tech firms abandoning traditional urban areas for outlying regions? Is this adding new cleavages in society? Is spatial restructuring going on? For example, do traditional industries and businesses locate in one area and new information and service-focused firms in another?

Cities and the Economy: What are the social, economic and environmental conditions that affect a city's contribution to the national economy and its international competitiveness? Of interest are social and physical infrastructures, large single market economic zones, job creation and innovation in cities, and the international trade of goods and services used in and by cities.

Diseconomies of agglomeration: Are cities growing too fast and consuming too much and unproductively the nation's economic resources? Would national economic performance improve if growth between urban and rural areas was more balanced?

Multi-jurisdictional Management: While responsibility for cities lies with municipal and provincial governments, the federal government also plays a significant role through its policies in such areas as transportation, employment, and immigration, and through its holdings of public lands. What are the dynamics of the linkages and what processes of vertical and horizontal coordination are needed to sustain the economic and social well being of urban areas and to support community responsibility and initiatives?

Cities and the Environment: The quality of urban environment affects the quality of life of its residents and the attractiveness of the community to investment. Cities also tend to impose a large "environmental footprint" on downstream and downwind areas. Environmental quality may be a determinant for attracting new investment. However, environmental regulations and pollution abatement initiatives can impose substantial costs and drive away firms that are unable or unwilling to shoulder the costs of investments not leading directly to productivity improvements. How should environmental concerns be integrated into urban policies, especially with respect to investment, employment, private-public partnerships and public participation?

Regional Competitiveness in the Global Economy

State of Knowledge

The building blocks of national economic growth are the regions of Canada. The federal government has long recognized the importance of regional development. Regional programming to address economic disparities began in earnest with the creation of the Atlantic Development Board in 1962 and the Fund for Rural Economic Development and the Agricultural and Rural Development Act in 1966. The emphasis and form of the federal commitment to regional economic development have varied widely since that period. The emphasis has ranged from national programs to alleviate regional disparities (measured by per capita income and unemployment rates), to regional economic development through the Department of Regional Economic Expansion and federal-provincial development agreements, to disbanding regional economic development departments and programs in the recession of the early 1980s, to the creation of regionally-based departments –WD, ACOA and FORD Q.

The lesson from this experience in regional development is that the current decentralized approach is the one most in tune with regional strengths and economic priorities. The OECD on reviewing the experience among member countries found:

... the regionalized, agency based system of economic development ... appears to be a significant improvement on the centralized system that it replaced. In particular, the system was considered flexible, allowing regions to develop policies and programmes which are appropriate and well-tailored for their needs ... All of the regions have different needs, and the solutions to their problems are not linked inextricably to the amount of money available ..." (Regional Problems and Policies in Canada, OECD, 1994).

Explicit regional economic programming, however, represents only a small proportion of the federal fiscal resources that affect regional development. Fiscal equalization, which began in the 1950s, accounts for the greatest amount of federal support for provinces with lower than average fiscal capacity. Regionalized investment tax credits have been in place in one

form or another since the mid-1970s. Other programs are in place to address specific regional problems. Many of these are income support programs and do not address regional demands for more solid economic growth or for a more diverse economic base.

While the institutional approach remains in place for explicit regional programming, the tools have changed. Whereas previously regional agencies used financial assistance as the main tool for development, now they are reducing greatly their direct financial assistance to business and adopting new ways to assisting economic growth within the regions. FORD Q has research underway on how to define the new role of the federal government in regional development in Quebec. The role of cities as clusters of economic development is a major element of that research.

The regional agencies now work in partnership with financial institutions, fill financing gaps for small new economy type firms, provide information and other services to SMEs and work much more at the community level, through Community Futures Development Corporations, to stimulate local economic activity. The challenge is to identify what needs to be done to make each region productive and competitive. ACOA, for example, is pursuing a research agenda focused on competitiveness. It has commissioned a number of research studies over the past year to measure and benchmark a broad range of competitiveness factors (Informetrica, 1996; KPMG, 1996; Plumstead and McNiven, 1996).

Disparities in levels of economic development, employment opportunities and discrepancies in the allocation of growth factors such as educational resources and research infrastructure, are important issues for reasons of equity. But with increasing globalization there is another reason – economic efficiency. Throughout the world, regions and sub-regional areas are becoming important nodes of economic growth. Is this happening in Canada? If so, how do we ensure that all regions can be competitive in the global economy? What are the major opportunities and obstacles to increasing economic growth within the various regions of Canada?

What needs to be Known

Regional Development Opportunities: The future prosperity of Canada will come from how well the regions can take advantage of the opportunities available to them. What are the special advantages of each region in meeting the needs of global competition? What needs to be done to realize their potential? Have economic flows and industrial structures in the country changed with the arrival of free trade and technology changes? Have the regions become more specialized and/or less economically diversified?

Clusters: Some of the most dynamic regions have benefited from the clustering of similar economic activities. Some emerge from the spin-offs from major research and development institutions. For example, former researchers and scientists employed by the federal Communications Research Centre and Bell Northern Research formed much of the high

technology industry in the National Capital Region. R&D industrial parks have played a role in the creation of others. Alliances and consortia of firms sharing common objectives can spread the benefits beyond the local level. How can governments facilitate the creation of such economic clusters and alliances without providing direct financial assistance? Are there special types of infrastructure that should be in place to foster such growth, such as R&D industrial parks, or fibre optic linkages? Can we demonstrate with case studies the factors and the particular Canadian dynamic forces that work to create or frustrate the creation of successful clusters?

Restructuring: Changing economic requirements leave many human casualties. Can we anticipate what parts of society or industrial sectors will be most affected in the coming years? How do we avoid structural changes resulting in long term unemployment? For those long term unemployed, how do we prevent welfare dependency and impoverishment?

Infrastructure: Governments are finding it increasingly difficult to fund the heavy investment needed for certain kinds of infrastructures, such as road, bridges and airports. New approaches are emerging, such as the build, own, operate and transfer (BOOT) model. These models see a consortium of engineering and financing interests take a stake in ensuring that the projects operate successfully (i.e., earn a return from the users). Can this approach play a role in meeting the infrastructure needs at the regional, urban and rural levels?

SME Growth, Entrepreneurship and Community Economic Development

State of Knowledge

The growth of small and medium sized enterprises (SMEs) is seen as a major component in promoting national growth and in making communities in all areas more prosperous. Research in this area is still in the formative stages and there is no generally accepted theory to guide research. A literature review prepared for Industry Canada (Canadian Council for Small Business and Entrepreneurship, *Factors Relating to SMEs: A Review of Research Findings*, May 1996) found important gaps in the identification and evaluation of strategies associated with stages of the growth process, particularly as they relate to:

- ☐ strategies employed at different stages of growth;
- ☐ financial capital and human resources availability as inhibitors of SME growth; and
- ☐ growth itself as a stress on the firm and a challenge to overcome.

Industry Canada's Entrepreneurship and Small Business Office has suggested a research agenda (*A Research Agenda, Entrepreneurship and Small Business*, March 1996) and poses a number of research questions. Apart from comparison studies, the research does not have explicit

locational dimension. Economic performance of SMEs, however, depends on the effective use of local advantages and resources, both physical, governmental and human. What are the local advantages and what can be done to make the most of them? How can government stimulate local entrepreneurial talent and shape labour skills to enhance a region's competitiveness?

ACOA has drawn lessons from its experiences in entrepreneurial development (Stevenson, 1996) in Atlantic Canada and FORD Q is looking at the problems facing SMEs within Quebec to ensure that the service lines the agency is establishing will be of value to their small business clientele. More research, however, needs to be undertaken at the local level on the business climate, attitudes to business risk and innovation, growth factors, etc. to complement the more general approach to SME research.

One approach to fostering SME growth at the local level is community economic development. CED is a process by which a community identifies the economic obstacles and opportunities it faces and takes action to address them. The difficulty for government involvement in a CED program is in providing the help (e.g., money) and then on the whole staying out of the decision-making process. This can create problems of accountability and visibility for government.

A benefit of this approach is that the services or activities undertaken are tailor made for the particular community. Since the community itself designed the package, there is less alienation from a distant government. The approach exemplifies the view of the Prime Minister that "all levels of government must find the means to bring decision making closer to citizens." (October 24, 1995 Speech).

CED has been associated with disadvantaged low income (e.g., third world, aboriginal, inner-city) communities. There is much anecdotal evidence about the effectiveness of CED, but a dearth of systematic research in Canada to support the conclusion that it is effective. FORD Q, however, currently is financing a multi-university research investigation of local and community development.

What Needs to be Known

Climate for SME and Micro-enterprise Growth: SMEs are the centre of many government efforts to promote jobs and growth. This raises questions about SMEs from a locational perspective. Notwithstanding the size of SME in the economy, how significant are SMEs to economic growth at the local level? Are such firms the right focus for stimulating job growth and economic development? What are the factors leading to faster growth of high wage or new economy SMEs in one region than in others? Are there micro business climates in some areas that favour growth, and if so can government help in creating them (e.g. through favourable regulatory regimes, taxation, locational incentives, training, export assistance, targeted support for groups not fully participating in the SME sector, such women and aboriginals)?

Micro-enterprises (often home based) in both urban and rural areas are becoming a noticeable economic phenomenon. How significant are they likely to be? How reliant are they on the success of large, medium and small clients? How can government support the creation of such enterprises?

Community Economic Development: The approach promises community made solutions to economic problems, including (similar to Community Futures Development Corporations) support for local entrepreneurs. How effective is the approach? Does it offer advantages for remote aboriginal communities? Given that the initiatives are locally driven, what role can the federal government play and how can it, or should it, use such local organizations for its own economic initiatives?

Financing: Small and medium sized firms, especially start up firms in new technologies and rural areas, complain of the difficulty of securing financing. Regional agencies are encouraging the offering of new financing instruments but there is a need to determine whether financing gaps are real barriers to the development of the new types of enterprises and to rural entrepreneurs. For new economy enterprises, are alternatives to traditional bank lending emerging? What is the role of regional equity capital pools in driving local or regional development? Do regional differences in financing instruments reflect differences in financing needs? What are the lessons from conducting a comparative approach to financing? Are the financing alternatives available to SMEs competitive with those available to international competitors? What is holding business back from competing internationally — lack of good ideas and management or a lack of capital? Can flexible business networks and/or joint ventures create the critical mass necessary for Canadian companies to compete internationally? What can government do to facilitate this process?

Research Work Plan

Many of the issues addressed in this paper are the responsibility of no one federal department, or even of the federal government itself. They are horizontal issues that cut across the federal mandate as well as involve provincial and municipal governments. For a number of issues, other levels of government may have the primary constitutional responsibility or can best carry out the needed research. On many of the issues, departments have conducted or are conducting research. The OECD has a research program into territorial issues that is complementary to the types of issues raised above.

To carry out the research agenda will require a **horizontal approach** across the many government departments that have responsibilities in the areas outlined. To coordinate and oversee the research, an interdepartmental Coordinating Committee on Research into Economic Development of Canada's Communities should be established. The committee would not replace or duplicate the work of existing interdepartmental groups involved in research issues (e.g., the Interdepartmental Committee on Rural and Remote Canada). Rather, it would work with them to ensure a consistent and comprehensive approach to development and implementation of the research agenda.

The Coordinating Committee should as a first step define the scope of the research agenda and issues further. The Committee would ensure that the research is do-able, does not duplicate research done elsewhere, and makes linkages to research already underway. This would require an inventory of the findings of existing research and a review of "best practices" in community, rural, urban and regional development.

In defining the issues the Committee would determine the priorities and identify lead departments for each particular issue. Depending on how broadly the Committee defines an issue, the lead department would invite other interested departments to participate as partners in the research or as commentators on the findings of the research. The lead department would also need to identify and consult with other potential partners at the provincial and municipal levels and where appropriate invite the participation of other stakeholder and research groups.

In the interdepartmental effort to refine the work agenda, departments and the Committee would identify the resources required to implement it. It is likely departments can accommodate most of the research within existing research programs and current resources levels, but the full resources needed will not be determined until completion of this stage.

The aim could be to have the Co-ordinating Committee complete a detailed research plan, with partners, expertise, staff and other resource requirements identified, for each issue area within the next six months. Timelines for completion of the first round of research would be for the next two years, with consideration of how the findings might define priorities for the next government agenda.

The Committee would oversee the work of all the regional and community research undertaken. It would also ensure that research does not overlap or is complementary to other research being conducted at the federal level under the medium term research agenda.

Given the horizontal nature of the research agenda, the Committee would invite all departments with stated interest in the research to participate in the interdepartmental committee and in the specific research issues. At minimum the departments invited would be the regional development departments, Industry Canada, Statistics Canada, Canada Mortgage and Housing Corporation, Agriculture and Agri-food Canada, Fisheries and Oceans, Indian and Northern Development, Natural Resources Canada, Transport, Environment Canada, Human Resources Development and Heritage Canada.

In the long-term consideration should be given to involving provincial and municipal organisations in the research framework. The extent and mechanisms of their participation merit further discussion.

Conclusion

National efficiency and social equity demand that the economic potential of the regions and communities of Canada be realized. Economic activity takes place in specific locations, which present both advantages and obstacles to the firms and entrepreneurs trying to succeed. Canadian communities are rich in diversity. There is an opportunity to take advantage of the diversity for a more socially and economic well endowed nation. The Prime Minister stated that "all levels of government must find the means to bring decision-making closer to citizens." (October 24, 1995, Speech) The challenge will be all the greater to respond to diversity in approaches to economic development while ensuring equity and achievement of national economic objectives.

Research needs to be undertaken to determine how the advantages can be maximized and obstacles overcome. The economic environment is changing rapidly and this presents new challenges and opportunities for the regions. Research is needed to determine how the globalization of the economy and new technologies are affecting the prospect for development among the regions and communities of Canada. The federal government itself is redefining its role in the delivery of programs and services. The impact of the reduction of federal presence is a topic of some importance both as it relates to economic development and the sense of belonging that the federal presence embodies.

While many of the issues are of a provincial or municipal nature, the federal government because of its many sectoral and other responsibilities and its responsibility for national economic performance is well placed to follow through on a research agenda on the development of Canada's communities. This will require a major effort at interdepartmental coordination and work with outside partners. Some of the research will be able to be conducted within current staff and resource levels. However, further elaboration of the agenda will be needed to determine whether new staff or funds will be required to conduct the identified research.

Selected References

Rural Economic Renewal

ARRG *Sustainable Rural Communities in Canada*, (Agriculture and Rural Restructuring Working Group, ARRG Working Paper Series, Number 1. 1989).

_____. *Stimulating Rural Economies for the 2000s*, (Agriculture and Rural Restructuring Working Group, ARRG Working Paper Series, Number 2. 1992).

_____. *Stimulating Rural Economies for the 2000s: the Challenge for Rural Manufacturing and Tradeable Services*, (Agriculture and Rural Restructuring Working Group, ARRG Working Paper Series, Number 4. 1993)

_____. *Towards a Whole Rural Policy for Canada*, (Agriculture and Rural Restructuring Working Group, ARRG Working Paper Series, Number 7. 1994)

Bollman, Ray and Brian Biggs. *Rural and small town Canada*, (Ottawa: Statistics Canada, 1992).

Canadian Institute for Research on Regional Development. *Economic Adjustment in Selected Coastal Communities*, (Moncton: Canadian Institute for Research on Regional Development, 1995).

Culver, D., K. O'Connor and S. Yap. *Comparison of the Incomes of Self-Employed Farm Operators with Other Self-Employed Occupations*, Farm Analysis Bulletin No. 43, (Ottawa: Agriculture and Agri-Food Canada).

Greer, Allan et al. *Local salmon management: a proposal for cooperative, community-based management of Canada's Pacific salmon resource*, (Vancouver: Department of Fisheries and Oceans, 1993).

Howard, W., G. Fox and C. Turvey. *Economic Benefits of New Information Technology* (Policy Branch, AAFC, in preparation)

Interdepartmental Committee on Rural and Remote Canada. *Rural Canada: A Profile*, (Ottawa: Government of Canada, 1995).

Langan, Joy. *Canada's single-industry communities: a proud determination to survive - a report*, (Ottawa: Canada Employment and Immigration Advisory Council, 1987).

Olfert, M. Rose. *Non-Farm Employment as a Response to Underemployment in Agriculture*, (Saskatoon: University of Saskatchewan, 1991).

OECD. *Partnerships for Rural Development*, (OECD, 1990)

_____. *What Future for Our Countryside? A Rural Development Policy*, Paris, OECD 1993).

_____. *Creating Rural Indicators for Shaping Territorial Policy*, (Paris, OECD 1994)

_____. *Rural Employment Indicators (REMI) - Structures and Dynamics of Regional Labour Markets*, (Paris: OECD, 1996).

_____. *Better Policies for Rural Development*, (OECD, 1996).

O'Toole, Christopher. *Age and Gender of Canadian Farmers*, Working Paper, (Ottawa: Agriculture and Agri-Food Canada).

Research Sub-Committee, Interdepartmental Committee on Rural and Remote Canada, *Rural Canada: A Profile*, (HRDC, Ottawa 1995)

Stabler, Jack C. and M.R. Olfert, *Restructuring Rural Saskatchewan: The Challenge of the 1990s* (Dept. of Ag. Univ. of Sask. 1992)

Stabler, Jack C. and M.R. Olfert and Murry Fulton. *The Changing Role of Rural Communities in an Urbanizing World* (Canadian Plains Research Centre, Regina 1992).

Statistics Canada *Mapping the Diversity of Rural Economies: A Preliminary Typology for Rural Canada*, (Agriculture Division, Working Paper # 29 1995)

Urban Growth

Canada Housing and Mortgage Corporation. *Canada's Granville Island*, (1989).

_____. *Montreal, in the City*, (1993).

_____. *Reconsidering the Dream: Sustainable Suburbia*, (1993).

_____. *Together We're Making a Difference*, (1993).

Morin, Richard. "Développement économique communautaire et revitalisation urbaine", *Plan Canada*, May 1995, pp.27-32.

OECD. *Why Urban Policy Matters*, (Paris: OECD, 1996).

Porter, Michael E. "The Competitive Advantage of the Inner City", *Harvard Business Review*, May-June 1995, pp. 55-71.

_____. "Many-splendoured things - A Survey on Cities", *The Economist*, June 29, 1995.

Regional Competitiveness in the Global Economy

Bernstein, Jefferey I. *International R&D Spillovers Between Industries in Canada and the United States*, (Ottawa: Carleton University, 1994).

Coulombe, Serge and Frank C. Lee. *Long-run Perspective on Canadian Regional Convergence*, (Ottawa: University of Ottawa and Industry Canada, 1996).

Courchene, Thomas J. *Globalization: The Regional /International Interface*, (Kingston: Queen's University, 1994).

Fortin, Pierre and Elhanan Helpman. *Endogenous Innovation and Growth: Implications for Canada*, (Montréal: Université du Québec à Montréal, 1995).

Hansen, Niles et al. *Regional Policy in a Changing World*, (New York: Plenum Press, 1990).

Industry Canada. *Economic Integration in North America: Trends in Foreign Direct Investment and the Top 1000 Firms*, (Ottawa: Industry Canada, 1994).

Ircha, M. C., et al. *Regional economic development and transportation: transportation as a competitive factor in Atlantic Canada*, (Fredericton: University of New Brunswick, 1992).

Informetrica Ltd. *Atlantic Canada Human Development Index Study* (for ACOA, March 1996).

KPMG. *A comparison of 1996 Business Cost in Atlantic Canada and the United States* (For ACOA, April 1996)

McGee, R. H. *Getting it right: regional development in Canada*, Series 1, (Montreal: Institute of Public Administration of Canada, 1992).

Mintz, Jack and Ross S. Preston. *Infrastructure and Competitiveness*, (Kingston: John Deutsch Institute and Industry Canada, 1994).

Nam, Chang Woon and Robert Koll. *Regional Systems of Innovation and Technology Parks - Case Study: Landshut and Bochum*, (Munich: Ifo Institut, 1996).

OECD. *Strategies Towards Sustainable Development: Final Report*, (Paris: OECD, 1996).

_____. *Regional Problems and Policies in Canada*, (OECD, 1994).

Plumstead, Janice E. and J.D. McNiven. *Atlantic Canada and the 50 States: A Development Comparison* (North American Policy Group, Dalhousie Univ. June 1996).

_____. *Atlantic Canada and the World.: A Development Comparison* (North American Policy Group, Dalhousie Univ. June 1996).

Savoie, Donald J. *Regional Economic Development: Canada's Search for Solutions*, (Toronto: University of Toronto Press, 1992).

Local Employment and Entrepreneurship Development

Blair, John P. *Local Economic Development: Theory and Practice*, (Thousand Oaks: Sage Publications, 1993).

Blakely, Edward James. *Planning Local Economic Development: Theory and Practice*, (Thousand Oaks: Sage Publications, 1994).

Bryant, Christopher R. *Strategic Management and Planning for Local Community Economic Development*, (St. Eugene, ON: Econotrends Limited, 1995).

Canada Housing and Mortgage Corporation. *Planning for Telework and Home-based Employment: A Canadian Survey of Integrating Work into Residential Environments - Main Report*, (1995).

Canadian Labour Force Development Board. *Labour Force Development and Government-Supported Community Economic Development: A Background Paper*, (Ottawa, 1996)

Community Economic Development Program (Canada). *Status Report/CED Program*, (Ottawa: Indian and Northern Affairs Canada, 1995).

Galaway, Burt & Hudson, Joe. *Community Economic Development: Perspectives on Research and Policy*, (Toronto: Thompson Educational Publications, 1994).

Goudzwaard, Bob & de Lange, Harry. *Beyond Poverty and Affluence: Towards a Canadian Economy of Care*

Industry Canada. *A Research Agenda for SMEs* (Entrepreneurship and Small Business Office, March 1996).

Loizides, Stelios. *The Role of Private Sector in Community Economic Development*, (Canada: Conference Board of Canada, 1994).

National Council for Urban Economic Development. *The Community Reinvestment Act and Economic Development: A Profile of Community Lending in Eight Cities*, (Washington, D.C.: National Council for Urban Economic Development).

OECD. *Jobs Study Follow-up: Thematic Review of Entrepreneurship and Job Creation Policies - Interim Report*, (Paris: OECD, 1996).

O'Neil, Tim et al. *From the bottom up: the community economic-development approach*, (Ottawa: Economic Council of Canada, 1990).

Perry, Stewart E & Lewis, Mike. *Reinventing the Local Economy: What 10 Canadian Initiatives Can Teach Us About Building Creative, Inclusive, and Sustainable Communities*

Ramsay, Merideth. *Community, Culture, and Economic Development: The Social Roots of Local Action*, (Albany, State University of New York Press, 1996).

Stevenson, Lois. *Lessons Learned from the Implementation of an Entrepreneurship Development Strategy in Canada: The Case of the Atlantic Region*, (Moncton: Atlantic Canada Opportunities Agency, 1996).

United Nations. *Accelerating the Development Process: Challenges for National & International Policies in the 1990s*, (New York: United Nations, 1991).

Walzar, Norman. *Local Economic Development: Incentives and International Trends*, (Boulder, Colorado: Westview Press, 1995).

Part



Research Possibilities

Interdepartmental Policy Research Co-ordination

Background

The Terms of Reference for the ADM's Policy Research Committee (PRC) requested the Committee to make recommendations for an interdepartmental research agenda and work program. This chapter makes several recommendations to that effect, building on the fruitful interdepartmental cooperation made possible through the PRC exercise.

General Observations

The PRC work made it quite clear that more frequent exchange of information is an urgent requirement. Good research is being done in many departments and the sheer number of submissions in response to the Committee's call for papers attests the importance that departments attach to policy research and development. Yet, departments have often been working in isolation. The PRC experience provided the opportunity for more intense interdepartmental exchange of information with respect to research plans, research interests and what is the current state of knowledge on key policy issues. With a more integrated and comprehensive picture of the research conducted in government, each department can now see better how the issues in its own areas of expertise interact with issues identified by others.

The PRC exercise has also been instrumental in forging contacts and links among departments' research heads. We now have an opportunity to consolidate these contacts and links in order to improve and increase cooperation and collaboration.

Finally, the 73 papers that were submitted clearly demonstrated considerable consensus, complementarity and commonality of interest. It was therefore possible to draw a high level of consensus on what the key current research issues facing the Government are and the main research gaps that need to be addressed.

In addition to those general observations, the Committee's recommendations described below have been formulated with the following considerations in mind:

- ❑ Departments may be involved in research activities and projects which may not make a list of common concerns or issues, but which may nevertheless be of significant importance, for their mandate and line responsibilities. Departments need to keep a high level of autonomy in the determination of their policy research needs and in their capacity to allocate resources to those needs.
- ❑ Departmental resources devoted to applied research are already highly stretched. In setting up new interdepartmental mechanisms or tasks relating to research activities, care should be taken not to overly bureaucratize the process, so researchers can focus on their primary mission; the production of high quality, policy relevant research to inform decision-makers.
- ❑ An important function of policy research must be the transformation of leading-edge theoretical and empirical research into recommendations for pragmatic policy initiatives. In that respect, it is crucial that the research function cement close ties with the policy development functions. In practice, however, this means there needs to be a forum to consider and discuss the results of research work.

Recommendations

The Committee's recommendations for continuation of interdepartmental collaboration fall under three broad headings: capacity, transparency and integration.

Capacity

Our first recommendation is essentially borrowed from another horizontal initiative. The Task Force on Horizontal Issues has recommended that "DMs invest in policy research and development in order to build the intellectual capital for dealing with the policy issues of the future". It is suggested that ADMs (Policy) focus on assessing their department's policy development capacity to undertake both shorter and longer term policy research; that they identify a centre of responsibility for long-term policy

development and anticipatory thinking; and, that they engage in joint management team meetings with key partners in other departments and with the broader policy community.

The PRC exercise revealed many good initiatives, although some were isolated. It also revealed inequalities among departments in resources and efforts devoted to research. While some of those inequalities will persist due to size or focus, there is general agreement among PRC participants to devote more attention to reducing them.

The Policy Research Committee developed a consensus on the research gaps relevant to a number of important policy issues (see Annex A). The need to reduce these gaps should help guide the research efforts of individual departments.

Transparency

Interdepartmental information exchange and collaboration on research activities should be pursued regularly through an Interdepartmental Research Forum composed of senior officials directly responsible for the applied research work programs of departments. This collaboration should focus on informing departments on progress made in research activities undertaken to address the policy research gaps identified.

The Interdepartmental Research Forum would be co-chaired by the DGs responsible for research at Industry Canada and at Human Resources Development Canada. It would meet three times a year or as needed.

Integration

In order to provide a catalyst for continuous collaboration and more integration, it is proposed that a joint research project be initiated by the Interdepartmental Research Forum. One key issue identified as a gap by the PRC is the transition to a knowledge-based society. As described in Annex B, the transition to the knowledge-based society has a number of integrated and interrelated economic, social and cultural dimensions. This topic cuts across the three basic themes identified in the Overview paper: growth, human development and social cohesion.

It is recommended that the Interdepartmental Research Forum undertake a pilot research project on "the factors leading to successful adjustment to a knowledge-based economy". The project should draw on contributions from participating departments over the next year. The Forum will report to the Policy Research Committee in the Fall of 1997, with a synthesis report on its findings and departmental presentations on the results.

Next Steps

Deputy Ministers may wish to consider the proposed course of action now or make decisions when they have established their priority issues for the medium term. In the latter case, the Policy Research Committee could meet again following the November 1996 DMs' retreat to review the research gaps and research proposal in light of the DMs' discussions and report back to CCDM (Policy) in December 1996 with a revised proposal.

Annex A

Policy Research Gaps

What are the causes of Canada's unfavourable economic performance vis-à-vis the United States?

- Canada has become more economically integrated with the United States, but our economic performance has lagged. Reversing this trend requires a deeper understanding of the reasons behind the divergence between the recent Canadian and American economic performances.

What are the implications of an ageing population and the increased importance of immigration on economic performance and social cohesion?

- Pressures associated with a growing elderly population will be most pronounced in the national pension and health care systems, but the differences of interest between generations may result in other economic, social and political pressures. In addition, as immigration continues to be the main source of population growth, the changing ethnic mix will have implications for the collective Canadian identity and social fabric.

Innovative approaches to reaching environmental objectives.

- How can we best develop and promote an integrated approach to social, environmental and economic policy?

Optimal target setting for macro-economic policies

- Concern of policy-makers over much of the medium term will focus on the appropriate targets for the debt-to-GDP ratio and the inflation rate. A main research task is to provide empirical support for reaching decisions on appropriate debt and inflation targets and understand the macro-micro linkages between those decisions and the implementation of structural policies.

What are the causes behind Canada's productivity slowdown?

- Despite tremendous advances in technology and policy initiatives aimed at improving productivity, productivity growth rates have fallen off. Understanding the causes of the slowdown is crucial to the design of future policies aimed at improving Canada's growth performance.

What are the factors leading to successful adjustment to a knowledge-based economy?

- The growth of the knowledge-based economic introduces a new set of transition problems for both firms and individuals. At the level of the firms, we need to know how high performance work systems can be effectively encouraged and diffused. For the workforce, we need to know how to develop a culture of continuous learning and how to prepare more Canadians for a life time of knowledge-intensive work.

How have the life paths and time allocation patterns of Canadians changed, and what is the impact of those changes?

- The way Canadians allocate their time to key life activities affects current and future production, the quality of care provided to children, the quality of life of individuals and families and the strength of local communities. The consequences of family "time crunch" and the changing nature of the world of work need to be monitored and better understood. More needs to be known about family preferences in balancing work, learning, leisure and caring activities.

Policy Research Gaps (Con't)

What are the characteristics of successful transitions for children, youth and workers retiring?

- We need to know more about the specific pathways that determine how a pre-school child can adapt successfully to a difficult family or socio-economic environment, how youth can achieve better entry in the labour market and progress towards middle positions in the workforce, and how older worker can leave the labour market while maintaining adequate standards of living.

What are the relative importance of the different factors driving earnings inequality? Is Canada on the path of the U.S?

- Research does not yet provide definite results on the respective role of various contributing factors to growing earnings inequality. Furthermore, conflicting theories regarding the likely impact of cuts in income support to disadvantaged population need to be confronted with solid empirical analysis.

What are the economic and social consequences of inequality, including the marginalization of certain sub-groups of the population, e.g. young Aboriginals?

- What is the impact of polarization on social cohesion and political stability? Further research on the economic and social consequences of inequality, as well as research on the payoff on public policy to reduce inequality, are needed to assist policy-makers in deciding whether current public investments are appropriate and adequate.

Pressures on the health care system.

- Population ageing and privatization of services are putting pressures on the health care system. Are there obstacles that are impeding the transformation of the health care system to address those pressures? What are the obstacles and costs associated with the growing risk of a major return to communicable disease?

What are the most successful strategies to building social capital?

- The relationship between social capital, the role of communities and networks, and social and economic progress deserves further study. In particular, more information is needed on the evolution of civic engagement and the growing role of the civic sector in human development and its potential contribution to successful life-course transitions for individuals and families.

What are the causes of the observed disjuncture between the values of the public and the elite in Canada?

- We need to understand the practical implications of this rupture for maintaining social cohesion and public faith in governments.

The measurement of, and relationships between, social cohesion and economic well-being?

- We need to construct better social indicators to measure and monitor social and human development. We need better ways of measuring well-being and collection information on social outcomes. Empirical research on concepts like economic insecurity and social cohesion -- what is it, how it can be measured and monitored, and how it affects social and economic progress -- need to be undertaken.

Annex B

Research Pilot Project Proposal

Research Issue: What are the factors leading to successful adjustment to a knowledge-based economy:

If one issue can be said to capture the many challenges and opportunities that face Canadians over the next decade, it is the need to make a successful transition to the knowledge-based economy. While a number of factors are involved in successfully managing this transition, a key element is facilitating adjustment at a governmental, organizational and individual level -- largely through the means of promoting continuous learning for organizations and individuals.

The transition to the knowledge economy has a number of integrated and inter-related economic, social and cultural dimensions. From an economic perspective, the growth of the knowledge-based economy holds the promise of increased productivity and an improved standard of living. It also introduces a new set of transition and adjustment challenges for governments, firms and individuals. From a social standpoint, the transition to a knowledge society holds the potential for greater social cohesion, or social fragmentation, depending on how this transition is managed. For individuals, the transition to the knowledge society presents great challenges as well as opportunities for economic advancement and personal development.

To help Canada and Canadians successfully adjust to this transition, we need to know:

- ☐ the dynamics of the "knowledge" economy and how to use these to enhance our capacities for generating new wealth and value-added on a global basis;
- ☐ given limited resources, the key public investments needed to ensure that the core infrastructure is in place to facilitate the transition to the knowledge economy;
- ☐ how the transition to the knowledge economy can assist Canada to conserve natural resources, address environmental concerns, and promote sustainable development;
- ☐ at the firm level, how new technologies and high performance work systems can be integrated, encouraged and diffused so as to capitalize on the talents and creativity of workers;
- ☐ the key skills and attributes the knowledge economy will require and how new innovative means of learning and networking to improve our capacities can be used to train and develop such workers;

- ☐ the key institutional mechanisms and essential financial supports required to develop a culture of continuous learning over the life-cycle;
- ☐ at the community level, key partnerships, linkages and knowledge networks needed to foster more integrated economic and social development;
- ☐ the key social investments in areas such as literacy and the cultural sector required to ensure the transition to the knowledge society includes all Canadians;
- ☐ how governments can use information and new electronic means of communication to provide better and more integrated services and information products to Canadians.

The research undertaken in this proposed pilot would be interdepartmental and interdisciplinary in scope.

Part

IV

Appendices

Terms of Reference

Objectives

- ☐ The purpose of the ADM Committee is to formulate an integrated research agenda and work program to address the related issues of economic growth, the distribution of work and income, social equity and social cohesion.
- ☐ To this end, the ADM Committee is asked to prepare a report for Deputy Ministers on the pressure points that are likely to arise in Canadian society by the year 2005 as a result of economic, demographic and social trends.
 - The report should provide an overview of the analytic research findings of Departments - and indicate what can and cannot be concluded about pressure points based on the findings.
 - The report should also suggest key policy implications of the research findings, i.e., what policy issues are raised by the key forces influencing the socio-economic environment over the next five to ten years.
 - Finally, the report should make recommendations regarding an interdepartmental research agenda and work program to help address gaps in knowledge regarding the socio-economic environment.

Activities

- ☐ Review results of departmental research activities regarding demographic, socio-economic and fiscal developments, e.g., those affecting productivity, industrial structure, work practices and changing labour markets, income distribution, urbanization vs. rural development, marginalization of particular groups (e.g., Aboriginal people), role of government in society and the federal government's role in the federation.
- ☐ Analyze research results for major socio-economic trends or pressures, particularly those that may affect the cohesiveness of Canadian society.
- ☐ Draw conclusions regarding the key forces affecting the Canadian socio-economic environment over the next five to ten years, and the policy issues raised for the federal government and other governments.
- ☐ Assess the impact of these forces on Canadian society, given the existing policy framework.

- ☐ Determine research gaps that constrain analysis of socio-economic trends or pressures.
- ☐ Formulate a research agenda and work program to continue to identify issues and challenges to the year 2005 and to address research gaps.

Timeframe

- ☐ Interim report, containing an initial scan of research findings, to be presented to CCDM (Policy) in September and, subsequently, to Deputies at their Fall Retreat.
- ☐ Proposed research agenda and work program to be submitted to CCDM (Policy) in September.
- ☐ Research agenda and work program to be completed over the next year or so.
- ☐ Committee could be continued thereafter to provide a common research and analytic focus to longer-term planning work undertaken by Departments.

Membership

- ☐ Industry and Human Resources Development to co-chair.
- ☐ Core members to include:
 - Canadian Heritage
 - Citizenship and Immigration
 - Environment
 - Finance
 - Fisheries and Oceans
 - Foreign Affairs and International Trade
 - Health
 - Human Resources Development
 - Industry
 - Privy Council Office
 - Statistics Canada
 - Western Economic Diversification
- ☐ The above list is not meant to be exclusive. Other departments may have relevant research activities underway and, therefore, may wish to participate. In addition, the Committee may choose to invite others to join in its work.
- ☐ Members to be designated by their Deputy Ministers.

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